PAGE 6

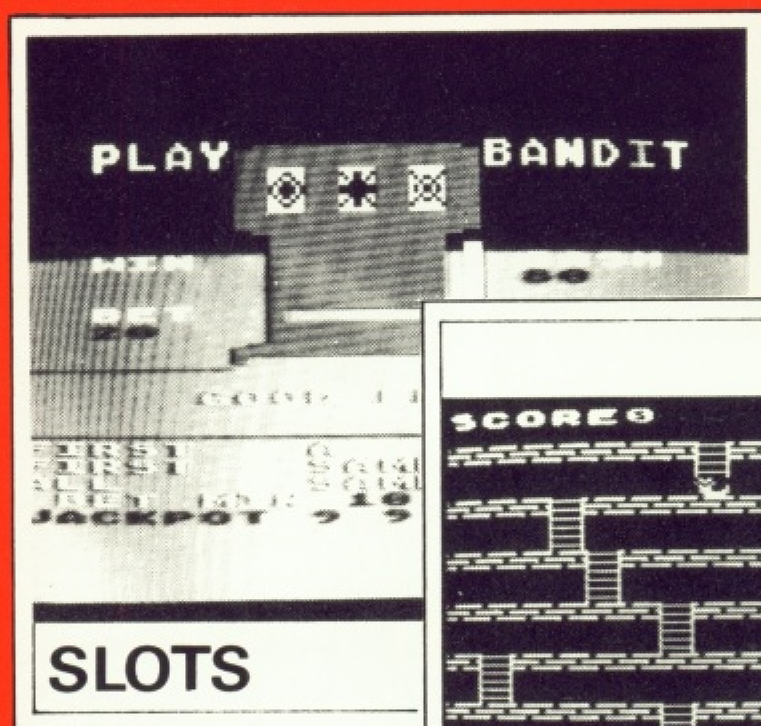
ISSUE 7
75P

INSIDE......

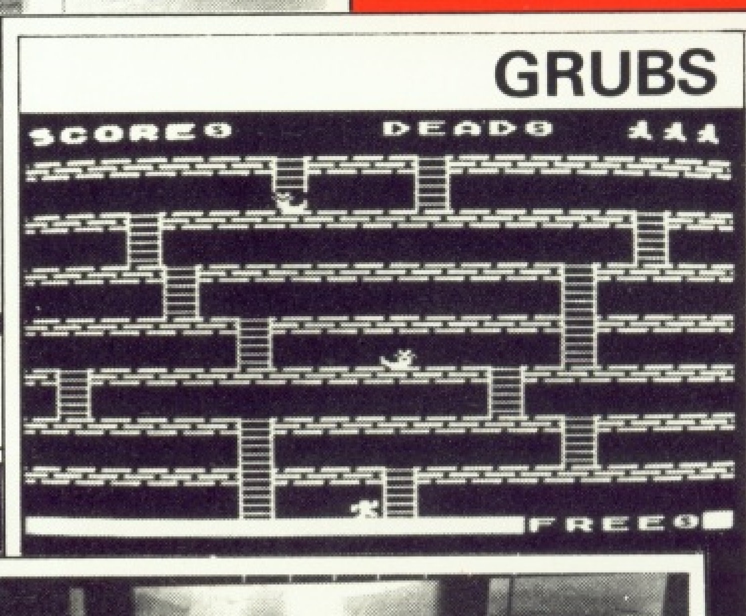
3 GREAT GAMES

SAVAGE POND REVIEW

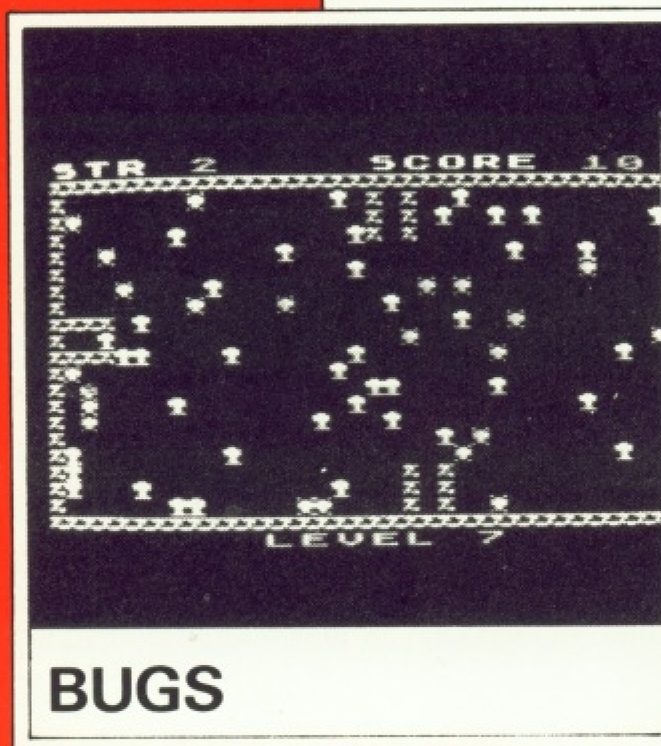
seasons GREETINGS



SLOTS



GRUBS



BUGS



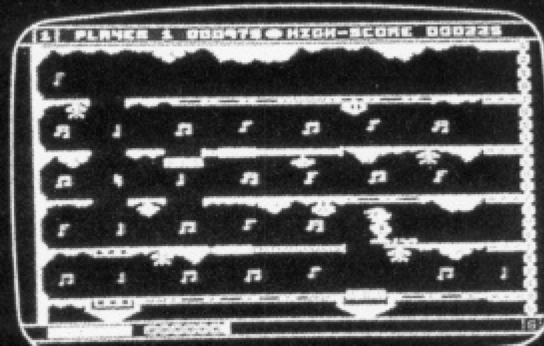
THE NEW YEAR

WIN....WIN....WIN....WIN....WIN.... £200 OF ENGLISH SOFTWARE

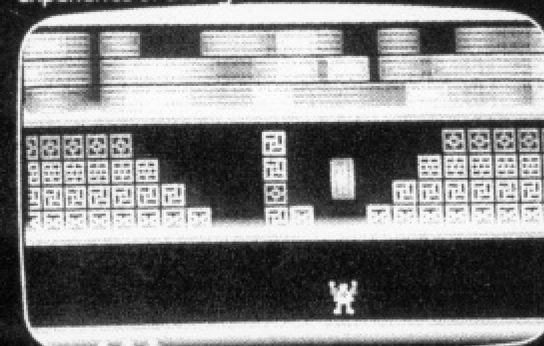
ATARI™ USERS MAGAZINE........AN ATARI™ USERS MAGAZINE...
......GAMES........ ATARI™.......NEWS........ ATARI™........ PROGRAMS



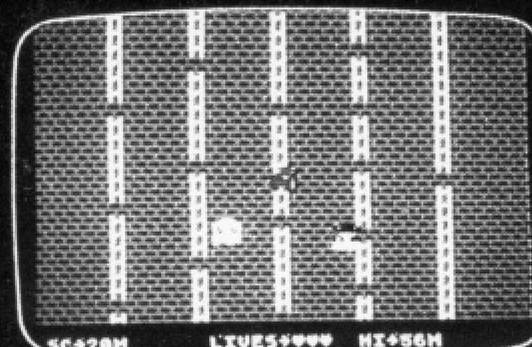
HYPERBLAST 32K by John Brierley
Simply the best arcade-action game ever written in 32K! Defend your Atari against 10 waves of the most awesome creatures ever to inhabit your TV screen!



JET BOOT JACK 32K by Jon Williams
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BATTY BUILDERS 16K by Manuel D. Caballero
One of the best non-violent game programs ever written! Can you rebuild the walls before the falling blocks and TNT stop you?



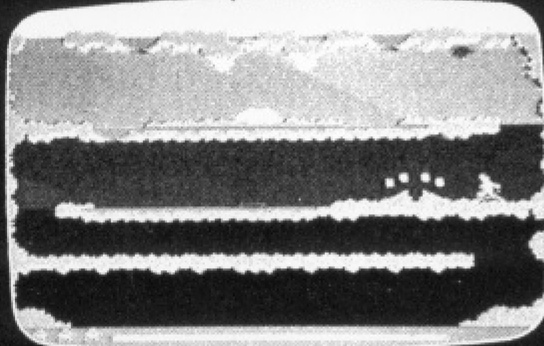
STEEPLE JACK 16K by Peter Hawkins
Climbing higher and higher up moving ladders, STEEPLE JACK encounters flying ghosts and falling elephants in his quest to reach the top! Is it real or just a dream?



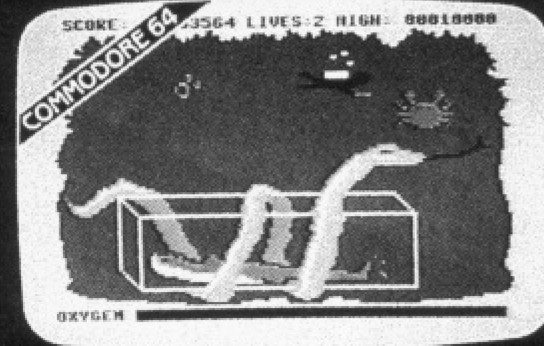
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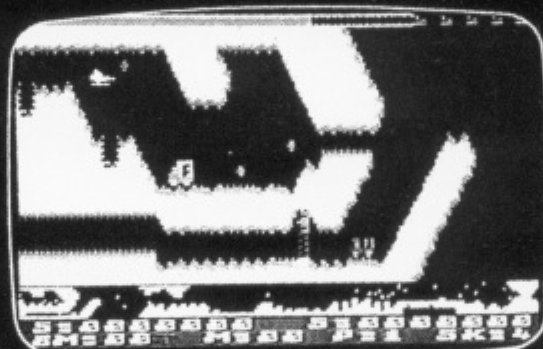
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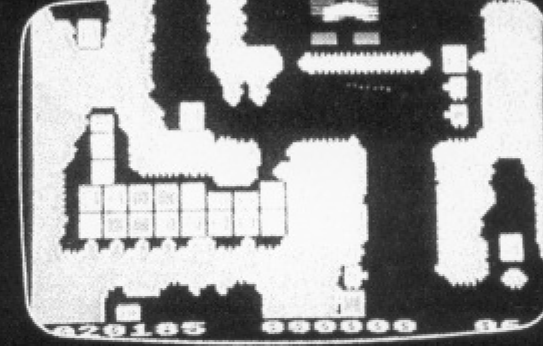
VISA

NEW FOR THE COMMODORE 64

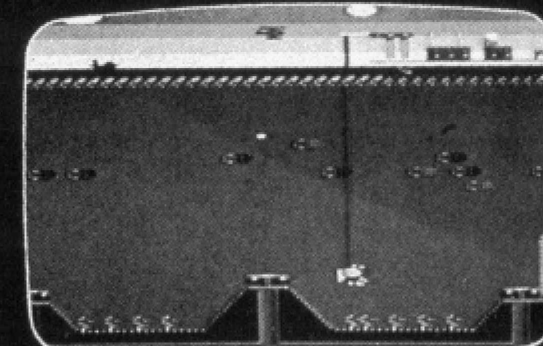
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PAGE 6

An ATARI™ Users Magazine

CONTENTS **ISSUE 7** **JANUARY/FEBRUARY** **1984**

SEE PAGE 10 FOR LISTING CONVENTIONS

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PAGE 6 is a Users magazine and relies entirely on readers' support in submitting articles and programs. The aim is to explore Atari computing through the exchange of information and knowledge and we cannot, unfortunately, pay for articles published. We hope you will gain satisfaction from seeing your work published and in turn we hope you will learn from articles submitted by other readers.

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From the Editor

WELCOME

With this issue, PAGE 6 welcomes hundreds of new readers, all proud new owners of an Atari 600XL. You bought the best home computer and I hope that with PAGE 6 you will get the maximum enjoyment from your machine. There is a whole new world waiting for you to explore and you will soon be able to do things that you never thought possible. Buy plenty of games by all means, but don't just do that, for the real joy in owning a computer lies in what YOU can create.

This is probably an opportune moment to re-state the philosophy behind PAGE 6. Although the situation is changing slowly, you will not find much for the Atari in the national computer press. In America, where there are many more machines, there are two dedicated Atari magazines and a host of others that provide regular support. The amount of third party products and advertising revenue is enormous allowing such magazines to grow. In the U.K., the story is vastly different and it is unlikely that similar magazines will appear. PAGE 6 was created to fill a gap and allow Atari owners to share their discoveries with others as a sort of national 'user group'. All of the articles and programs come from YOU and without your dedication and support the magazine would fold. Contributions are mainly voluntary, i.e. you don't get paid, but I would hope that the satisfaction of seeing something you have written published in a magazine read by Atari enthusiasts all over the world will be reward enough. Many people seem to think that, because of the quality of the magazine, PAGE 6 is produced by a 'big' publisher. That is not so, all of the 'staff' are listed on page 3! We accept advertising for two reasons. Firstly, it pays for the quality of the magazine (just) and secondly, in a country that does not have the same support for Atari as for other machines, it allows you, the reader, to find products you might not otherwise know about and hopefully encourages those who want to produce software and expansions for the Atari to advertise at very reasonable rates.

That's it then. It is your magazine. When you write a program or discover a new aspect of your Atari, please send it in for others to share.

News and New Products

Christmas Comes . . .

What to get for Christmas? Well, here are a few software items that are available in America NOW (mid-November) and may have reached these shores by the time you read this. Phone your local, or not so local, retailer for more details (mention PAGE 6 please). First, another blockbuster from Chris Crawford, **EXCALIBUR** from APX is set in Arthurian England and requires you to play the role of Arthur in his quest to become King of all England. I have a full review of this from the U.S. and it sounds magnificent. I remember over a year ago chatting to someone who had been over to Atari and they were ecstatic about this one, having seen only the titles! If any reader who can play Eastern Front gets hold of **EXCALIBUR,** please, please review it for us. Next is **ACTION!,** a new original language for the Atari which comes as a 24K bank-switched cartridge. It is a structured language similar to C and runs 100 to 200 times faster than Basic. **QUASIMODO** is from Synapse and is a Donkey Kong type game but much more elaborate with 'incredible graphics and sound'. Also from Synapse watch out for **ENCOUNTER** which was written here in England and is a **SUPERB** arcade game reminiscent of Battlezone. This one should be in every arcade-freak's Christmas stocking. Atari's **POLE POSITION** is just **GREAT** and should **SURELY** be out by now, if not someone at Atari wants his head examined. This is the type of top-level game that only the Atari was designed for which brings us neatly to . . .

Several of the original design team, including an ex-Atari president have formed a new Company called MINDSET which will be producing a new 68000 home computer with three custom graphics chips. This new machine is supposed to be several steps ahead of present home computers. The 68000 is a 16/32 bit chip. Do you know what this means, folks? It means that Warner Bros. and Atari have got some hard work ahead of them next year, that is of course if Warner Bros. still own Atari, but then that's another story . . . !

(U.S. news items courtesy of Mike Dunn of A.C.E. Newsletter, Oregon) ●

Opinion

Turn of the Year

Les Ellingham

In order to look forward we must first look back to see how Atari computers and third party support fared in the U.K. in 1983. The picture is unfortunately not particularly good as Atari themselves made a number of marketing mistakes and the level of third party support failed to increase significantly.

The biggest mistake of the year was Atari's announcement of their new range of machines long before they became available. Much of the range is still not available and may not be until well into 1984. Most dealers reported a significant drop in sales of the 800 when the new machines were announced as people held back waiting to buy a new machine. They waited, and waited, and many stopped waiting and went out and bought a Commodore 64 instead. Commodore increased their profits whilst Atari increased their losses. This type of marketing seems very strange for an American Company - the land that invented fast food. Today's society is an instant society where we are conditioned to expect everything NOW. In the States if you don't get your hamburger or pizza within a couple of minutes of entering the shop, you walk out and spend your money across the road. It is no different at any level except that the minutes become weeks but in the end if you don't get served you go somewhere else. During the three months to November, Atari lost a considerable number of sales in the U.K. simply because they could not supply what everyone knew was coming, and they kept the price of the 800 at too high a level. Not too high for what is undoubtedly the best home computer on the market, but too high for a machine that would be 'out of date' in a couple of months. That's another aspect of today's society - nothing is worth buying unless it is 'new'.

The other major area where Atari have gone wrong is in the pricing structure of their software, where they continue to defend their policy of very high prices. Mr Eric Salamon, Atari's U.K. marketing manager was recently quoted, when defending the prices for Atari's conversions to other machines, as saying 'These games are the best-selling games worldwide and at the end of the day you are paying for artistic input'. Wrong, Mr Salamon, absolutely wrong. Nobody cares about 'artistic input', computer games have reached a stage where it is taken for granted. Sad, but true. Computer games are not works of art but are ephemeral consumer products that hold their interest only until something new comes along and the average owner would rather buy two or three 'new' items than one 'work of art'. Over the last year, the software market has changed and people are no longer willing to pay out large sums of money for single items, and if you don't believe it ask yourself why all the original stockists of Atari related software are now selling off huge amounts of stock at severely discounted prices.

On the third party side development has been very slow with only a couple of names springing readily to mind. Only English Software and Channel 8 Software have produced any significant amounts of software and Channel 8's are mainly conversions from other machines. One of the reasons for this lack of development is that Atari came as an 'instant' machine. All of the software was already available from America and had reached such a standard that most owners believed they could not compete. With a newly introduced machine such as the Dragon, no software existed with the result that ordinary owners - like you and me - chanced their arm and put out software they had written. Some of them flourished to form a home grown software industry. As part of the research for this article, I looked at the advertisements in YOUR COMPUTER and COMPUTER & VIDEO GAMES and found a total of 26 independent companies offering Dragon software and only 8 selling software for the Atari.

There are only a few small companies willing to have a go at producing Atari software such as Soflow Software of Leicester and C.S. Software in Cheshire and they should be congratulated and supported for sticking to Atari in a very strange market that in general does not support home-grown Atari software. Companies such as these deserve your support for even if their products are not up to the top U.S. standard - and I am making no adverse comment on their software - they deserve all the support they can get. It takes time and encouragement to produce the best software. Encouragement comes from selling products and that is where you can help to develop a strong U.K. market with Atari software

available at *very reasonable prices.*

NEXT YEAR...

So what of 1984. Firstly, I can only hope and pray that some of these wonderful new products we all know about appear very, very quickly. The longer they are delayed, the more people will turn away from Atari. Secondly, I believe that Atari will see the light and reduce the price of their software quite drastically. American software will continue to be available but only from specialist outlets, you will have to buy Mail Order or make a special trip. A very small number of new companies will be offering U.K. produced software for the Atari whilst English Software Co. will dominate the market and will grow into a company equivalent to the big U.S. producers. Calisto Software, who seem to have had a very quiet year after the initial explosion of interest in Atari, will bounce back with several new titles but will also be manufacturing for other machines and are unlikely to concentrate on Atari.

The biggest influence in 1984 though, will be YOU. You will decide whether or not you want to pay high prices or support home produced software from some of the smaller as well as the bigger U.K. producers. The way you spend your money will determine exactly who survives and grows in 1984.

Finally, one bright and rising star to look out for in 1984 is STARCADE who have already produced two excellent and unique games that can match anything put out across the water. I urge you to look at their products in 1984, for if they gain the support needed to continue to produce games of such high quality and originality, they will be the undoubted stars of 1984 and, along with English Software Co., will make you glad you bought the finest home computer ever produced. ●

Games

Slots

Ken Woodward, Abertillery

Las Vegas comes to your home! Now you can gamble away to your heart's content without risking a penny, you don't even have to buy the program!

Slots needs very little description to play. Just type it in and RUN it. You will be asked to wait a moment before the title display comes up and there will then be a short delay before the one-arm bandit appears. From there on, just enter your bet. There is a nudge feature that appears at random and you simply press the A, B or C keys according to which reel you wish to nudge, or W to collect. All necessary prompts are on the screen.

If you prefer to use the joystick to enter your bets, then delete lines 310, 330 and 1060 to 1140 and add the following

```
1060 BET=10:REM GET BET
1070 S=STICK(0)
1080 BET=BET+(S=14)-(S=13):IF BET<10 T
HEN BET=10
1090 IF BET>29 THEN BET=29
1095 POSITION 2,8:? #6;BET
1100 IF BET>CASH THEN POP :GOTO 280
1105 IF STRIG(0)=0 THEN RETURN
1110 GOTO 1070
```

As all the best gamblers say before they take your money - best of luck, pal!

```
10 REM ******************************
11 REM *           SLOTS            *
12 REM *                            *
13 REM *      BY KEN WOODWARD       *
14 REM *                            *
15 REM ******************************
70 DIM BLANK$(20):BLANK$="
     "
80 GOSUB 1330
90 POKE 704,232:POKE 705,232:POKE 706,
15:POKE 707,15
100 OPEN #1,4,0,"K"
110 CASH=100:WIN=0:BET=0
120 GOSUB 1520
130 POKE 53774,64:POKE 16,64:REM BRK
140 POKE 704,232:POKE 705,232:POKE 706
,15:POKE 708,0:POKE 709,172:POKE 710,1
10:POKE 711,238:POKE 712,242
150 POSITION 2,0:? #6;"PlaY        baNd
iT"
160 REM
170 POSITION 7,1:? #6;"5 7 8"
180 POSITION 2,4:? #6;"WIN"
190 POSITION 2,7:? #6;"BET"
200 POSITION 14,4:? #6;"CASH"
210 POSITION 14,5:? #6;CASH
220 POSITION 0,15:? #6;"first 1 a  9
=1Xbet"
230 POSITION 0,16:? #6;"first 2 same
=2Xbet"
240 POSITION 0,17:? #6;"all   3 same
=3Xbet"
250 POSITION 2,5:? #6;WIN
260 POSITION 0,19:? #6;"JACKPOT 9 9 9
= 250"
270 POSITION 1,18:? #6;"bet min 10 max
 29  "
280 FOR F=1 TO 3:SOUND 0,50,10,8:POSIT
ION 3,12:? #6;"              ":FOR W=1
 TO 50:NEXT W
290 SOUND 0,100,10,8:POSITION 2,12:? #
6;" enter your bet ":FOR W=1 TO 50:NEX
T W:NEXT F:SOUND 0,0,0,0
300 GOSUB 1060:REM GET BET
310 POSITION 3,12:? #6;" PRESS START
"
320 CASH=CASH-BET:POSITION 14,5:? #6;C
ASH;"  "
330 IF PEEK(53279)<>6 THEN 330
340 POSITION 2,5:? #6;"   ":POSITION 3
,12:? #6;"  good luck   ":GOSUB 2040
350 REM DETERMINE RANDOM A B AND C
360 A=INT(10*RND(0))
370 B=INT(10*RND(0)):IF INT(4*RND(0))=
1 THEN B=A
380 C=INT(10*RND(0)):IF B=A THEN IF IN
T(3*RND(0))=1 THEN C=A
390 REM ROLL
400 FOR R=1 TO 50
410 SOUND 0,R+12,10,10
420 FOR W=1 TO 2:NEXT W
430 SOUND 0,0,0,0
440 E=INT(10*RND(0)):F=INT(10*RND(0)):
G=INT(10*RND(0))
450 POSITION 7,1:? #6;E:POSITION 9,1:?
 #6;F:POSITION 11,1:? #6;G
460 NEXT R
470 POSITION 7,1:? #6;A
480 FOR R=1 TO 30
490 SOUND 0,R+40,10,10
500 FOR W=1 TO 2:NEXT W
510 SOUND 0,0,0,0
520 E=INT(10*RND(0)):F=INT(10*RND(0)):
G=INT(10*RND(0))
530 POSITION 9,1:? #6;F:POSITION 11,1:
? #6;G
```

```
540 NEXT R
550 POSITION 9,1:? #6;B
560 FOR R=1 TO 20
570 SOUND 0,R+60,10,10
580 FOR W=1 TO 2:NEXT W
590 SOUND 0,0,0,0
600 E=INT(10*RND(0)):F=INT(10*RND(0)):
G=INT(10*RND(0))
610 POSITION 11,1:? #6;G
620 NEXT R
630 POSITION 11,1:? #6;C
640 SOUND 0,0,0,0
650 X=INT(10*RND(0))+1:IF X<5 THEN GOS
UB 670
660 GOTO 830
670 REM NUDGE
680 POSITION 0,12:? #6;"TYPE a b c FOR
 NUDGE"
690 POSITION 0,13:? #6;"TYPE  w  FOR
 WINS "
700 FOR Z=1 TO X
710 POSITION 7,4:? #6;"nUdgE":POSITION
 9,5:? #6;X+1-Z
720 GET #1,Q
730 IF Q=65 THEN A=INT(10*RND(0))
740 IF Q=66 THEN B=INT(10*RND(0))
750 IF Q=67 THEN C=INT(10*RND(0))
760 IF Q=87 THEN 790
770 IF Q<65 OR Q>67 THEN GOTO 720
780 POSITION 7,1:? #6;A:POSITION 9,1:?
 #6;B:POSITION 11,1:? #6;C:NEXT Z
790 POSITION 7,4:? #6;"     ":POSITION
 9,5:? #6;" "
800 POSITION 0,12:? #6;BLANK$
810 POSITION 0,13:? #6;BLANK$
820 RETURN
830 REM TEST FOR WIN
840 REM
850 IF A=9 AND B=9 AND C=9 THEN WIN=25
0:CASH=CASH+WIN:GOTO 1230
860 IF B=A AND C=A THEN WIN=3*BET:CASH
=CASH+WIN:GOTO 960
870 IF B=A THEN WIN=2*BET:CASH=CASH+WI
N:GOTO 960
880 IF A=9 THEN WIN=BET:CASH=CASH+WIN:
GOTO 960
890 REM LOSE
900 POSITION 2,12:? #6;"   you  lose
 "
910 POSITION 7,10:? #6;"sorry":FOR N=0
 TO 200:SOUND 0,N,10,8:NEXT N:POSITION
 7,10:? #6;"      ":SOUND 0,0,0,0
920 POSITION 14,5:? #6;CASH;"  "
930 POSITION 2,5:? #6;"   "
940 IF CASH<10 THEN GOTO 1150:REM BUST
950 GOTO 280
960 REM WIN
970 POSITION 3,12:? #6;"   you win
 "
980 POSITION 2,5:? #6;WIN;"  "
990 FOR M=1 TO 12:FOR P=7 TO 8:POSITIO
N P,P:? #6;"0000":POSITION P,P:? #6;"
 ":NEXT P:NEXT M
1000 FOR N=200 TO 0 STEP -1:SOUND 0,N,
10,8
1010 NEXT N:SOUND 0,0,0,0
1020 POSITION 3,12:? #6;BLANK$
1030 POSITION 14,5:? #6;CASH;"  "
1040 IF CASH>999 THEN GOTO 1170:REM WO
N TOO MUCH
1050 GOTO 280
1060 POSITION 2,8:? #6;"  ":REM GET BE
T
1070 GET #1,Q:Q=Q-48:IF Q<1 OR Q>2 THE
N POP :GOTO 280
1080 IF Q=1 THEN POSITION 2,8:? #6;Q:Q
=10
1090 IF Q=2 THEN POSITION 2,8:? #6;Q:Q
=20
1100 GET #1,Q1:Q1=Q1-48
1110 IF Q1<0 OR Q1>9 THEN POP :GOTO 28
0
1120 POSITION 3,8:? #6;Q1:BET=Q+Q1
1130 IF BET>CASH THEN POP :GOTO 280
1140 RETURN
1150 REM NO CASH LEFT
1160 POSITION 2,12:? #6;"sorry no cred
it":GOTO 1190
1170 REM WON TOO MUCH
1180 POSITION 2,12:? #6;"i'm out of ca
sh"
1190 CASH=100:WIN=0:BET=0:FOR W=1 TO 1
000:NEXT W:POSITION 2,12:? #6;"PRESS S
TART    ":POSITION 14,5:? #6;"    "
1200 POSITION 2,5:? #6;"   "
1210 IF PEEK(53279)<>6 THEN 1210
1220 GOTO 210
1230 REM JACKPOT
1240 FOR EXP=4 TO 10 STEP 2
1250 FOR F=200 TO 50 STEP -1
1260 SOUND 0,F,10,EXP
1270 POKE 704,F:POKE 705,F:POKE 706,F-
8:POKE 710,F-12:POKE 712,F-16
1280 NEXT F:NEXT EXP
1290 SOUND 0,0,0,0
1300 POSITION 3,12:? #6;"
 "
1310 POSITION 14,5:? #6;CASH;"  "
1320 GOTO 140
```

continued on page 1?

600XL OWNERS

If you have traded in your 400 for a 600XL and knew your old machine fairly well, start PEEKing and POKEing around in the 600. There are several refinements built in such as fine scrolling (really!) in text modes, fast cursor control and keyboard disable all achieved with a single POKE! Any information you can discover will be published as we wish to do a full article on the differences to enable existing owners to decide whether to 'upgrade'.

Listing Conventions

As far as possible, the listings will be 38 characters wide to allow you to match up to the screen, but where control characters are explained in a line this will not be possible.

Three types of characters are difficult to reproduce in a listing—Inverse, Control and Inverse Control.

INVERSE—all characters to be typed in inverse are underlined.

CONTROL—characters which require the CTRL key to be pressed are shown in square brackets [ ]. Press CTRL and the key shown in the bracket. Characters which require the ESC key to be pressed first will show ESC,CTRL followed by a word or words to describe the key to be pressed. You may have to refer to your Basic Reference Manual if you do not understand some of the keys.

INVERSE CONTROL—characters will be shown in pointed brackets <>. Follow the instructions for control characters but press the Atari key first.

The listings should be typed as accurately as possible and MUST be typed exactly if TYPO is used to check them.

SLOTS . . . continued from page 9

```
1330 POKE 106,PEEK(106)-8:CHSET=PEEK(1
06)+6
1340 GRAPHICS 18
1350 POSITION 0,4:? #6;"PLEASE WAIT A
MOMENT"
1355 FOR I=0 TO 511:REM REP CHAR SET
1360 POKE CHSET*256+I,PEEK(57344+I)
1370 NEXT I
1380 FOR I=0 TO 71:REM ALTER CHAR SET
1390 READ A
1400 POKE CHSET*256+128+I,A
1410 NEXT I
1420 DATA 60,90,153,255,255,153,90,60
1430 DATA 66,165,90,52,44,90,165,66
1440 DATA 24,24,60,231,231,60,24,24
1450 DATA 24,24,60,255,255,60,24,24
1460 DATA 129,90,36,90,90,36,90,129
1470 DATA 24,36,90,189,189,90,36,24
1480 DATA 153,90,60,255,255,60,90,153
1490 DATA 189,66,165,153,153,165,66,18
9
1500 DATA 195,195,36,24,24,36,195,195
1510 RETURN
1520 REM DISPLAY INT
1530 FOR I=0 TO 15:READ C:POKE 1536+I,
C:NEXT I:DATA 72,169,100,141,10,212,14
1,26,208,169,224,141,9,212,104,64
1540 POKE 512,0:POKE 513,6
1550 GRAPHICS 1:POKE 756,CHSET
1560 A=PEEK(560)+PEEK(561)*256
1570 POKE A+8,10+128
1580 POKE 54286,192
1600 A=A+4:REM CUSTOM SCREEN
1610 POKE A-1,71
1630 POKE A+2,7:POKE A+3,7
1640 POKE A+21,65:POKE A+22,PEEK(560):
POKE A+23,PEEK(561)
1650 POKE 708,118
1660 POSITION 3,12:? #6;"K.WOODWARD 19
82"
1670 POSITION 0,10:? #6;"______
______"
1680 POSITION 0,14:? #6;"_____________
______"
1690 POSITION 2,0:? #6;"PLAY       BAN
DIT"
1700 REM PLAYERS 1 2 3 4
1710 X=96:Y=18
1720 A=PEEK(106):POKE 54279,A:PM=256*A
1725 FOR I=PM TO PM+1023:POKE I,0:NEXT
 I
1730 POKE 559,46:POKE 53277,3
1740 POKE 53248,X:POKE 53249,X+24:POKE
 53250,X:POKE 53251,X+24
1750 POKE 53256,3:POKE 53257,3:POKE 53
258,3:POKE 53259,3
1760 FOR I=PM+512 TO PM+1024:POKE I,0:
NEXT I
1770 FOR I=PM+512+Y TO PM+561+Y:READ A
:POKE I,A:NEXT I
1780 DATA 127,255,255,255,255
1790 DATA 204,204,204,204,204,204,204,
204,204,204
1800 DATA 255,255,255,255,127
1810 DATA 63,63,63,63,63
1820 DATA 63,63,63,63,63
1830 DATA 63,63,63,63,63
1840 DATA 63,63,32,32,32
1850 DATA 63,63,63,63,63
1860 DATA 127,255,255,128,128
1870 FOR I=PM+640+Y TO PM+689+Y:READ A
:POKE I,A:NEXT I
1880 DATA 254,255,255,255,255
1890 DATA 51,51,51,51,51,51,51,51,51,5
1
1900 DATA 255,255,255,255,254
1910 DATA 252,252,252,252,252
1920 DATA 252,252,252,252,252
1930 DATA 252,252,252,252,252
1940 DATA 252,252,4,4,4
1950 DATA 252,252,252,252,252
1960 DATA 254,255,255,1,1
1970 FOR I=PM+773+Y TO PM+782+Y:READ A
:POKE I,A:NEXT I
1980 DATA 49,49,49,49,49,49,49,49,49,4
9
1990 FOR I=PM+901+Y TO PM+910+Y:READ A
:POKE I,A:NEXT I
2000 DATA 140,140,140,140,140,140,140,
140,140,140
2010 FOR I=PM+918+Y TO PM+932+Y:READ A
:POKE I,A:NEXT I
2020 DATA 1,1,1,1,1,1,1,1,1,1,1,1,1,3,
3
2030 POKE 53256,3:POKE 53257,3:POKE 53
258,3:POKE 53259,3:POKE 623,4:RETURN
2040 RESTORE 2060:FOR I=PM+918+Y TO PM
+937+Y:READ A:POKE I,A:SOUND 0,50,0,4:
NEXT I:SOUND 0,0,0,0
2050 FOR I=PM+937+Y TO PM+918+Y STEP -
1:READ A:POKE I,A:NEXT I
2060 DATA 0,0,0,0,0,0,0,0,0,0,0,0,0,3,
3,1,1,1,1,1,0,0,0,0,0,3,3,1,1,1,1,1,1,
1,1,1,1,1,1,1
2070 RETURN
```

□

✪ THE TOP TEN ✪

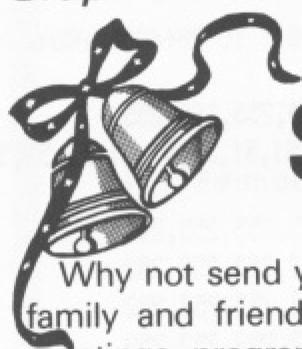
1.	**ZEPPELIN**	Synapse	32K C/D
2.	**ATARIWRITER**	Atari	16K ROM
3.	**A.C.E**	English Software	16K C
4.	**EASTERN FRONT**	Atari	16K ROM
5.	**TENNIS**	Atari	16K ROM
6.	**PLANETFALL**	Infocom	32K D
7.	**ATARI LOGO**	Atari	16K ROM
8.	**DONKEY KONG**	Atari	16K ROM
9.	**MAGIC WINDOW**	Quicksilva	16K C
10.	**THE ARCADE MACHINE**	Broderbund	48K D

This chart represents sales up to 11/11/83

Figures supplied by
The Atari Center 021 643 9100

```
1 REM *********** DEMO **************
2 REM * INDIAN  RUG by Les Ellingham *
3 REM *******************************
10 GRAPHICS 10
50 C=4:T=7
60 FOR I=704 TO 711:POKE I,T:T=T+2:NEX
T I
100 FOR X=0 TO 79 STEP 2
115 C=C+1:COLOR C
120 FOR Y=0 TO 191 STEP 2
130 PLOT 60,85:DRAWTO X,Y
140 PLOT 60,85:DRAWTO 79-X,Y
150 IF Y>85 THEN DRAWTO X,Y
160 NEXT Y:NEXT X
200 GOTO 200
```

Graphics and Music



Season's Greetings



Why not send your own Christmas greeting to family and friends using your Atari? With this greetings program you can type in your own messages and play them back accompanied by some seasonal music. Why not type a message for the kids on Christmas day and leave the program running for them to 'press a key' when they open their presents? Assuming of course you can get up before them!

Just type in your message at the prompt. A$ is dimensioned to hold 2000 characters but you can change this if you want. If you hear the end of line buzzer when typing in your message just hit return and continue on the next line. If you finish the line at the end of a word you must start the next line with a space. Don't worry about your input being in lower case, it is supposed to be that way. When you have finished your message press return twice.

That's all there is to it. Now all someone has to do is to 'press a key' for their greeting. If you press any key while the program is running, the music will change. Have yourself a merry little Christmas.

```
1 REM ********************************
2 REM *    MERRY CHRISTMAS FOLKS     *
3 REM *       put together by        *
4 REM *        LES ELLINGHAM         *
5 REM *  from some music composed    *
6 REM *     by TOM HUDSON and        *
7 REM * a banner from PHIL GRIFFIN   *
8 REM ********************************
20 DIM X$(120),A$(2000):A$="
  ■
25 OPEN #1,4,0,"K:":TUNE=1
30 GOSUB 600
35 GRAPHICS 18:SETCOLOR 0,12,8:N=50
40 POKE 712,50:POKE 710,14:POKE 708,14
45 POSITION 5,4:? #6;"PRESS A KEY":GET
 #1,KEY:POSITION 5,4:? #6;"
"
50 SCREEN=PEEK(88)+256*PEEK(89):FOR I=
1 TO 180:POKE SCREEN+INT(RND(0)*240),1
4:NEXT I
60 POSITION 2,3:? #6;"****************
"
65 POSITION 2,4:? #6;"*              *
"
70 POSITION 2,5:? #6;"****************
"
100 POKE 764,255:TUNE=3-TUNE
110 IF TUNE=1 THEN REP=3:DELAY=8:CAROL
=230:RESTORE CAROL
120 IF TUNE=2 THEN REP=2:DELAY=7:CAROL
=360:RESTORE CAROL
140 FOR I=1 TO REP
150 READ A,B,C,D:IF D=-1 THEN RESTORE
CAROL:NEXT I:FOR DE=1 TO 500:NEXT DE:G
OTO 110
160 M=M+1:IF M>LEN(A$)-13 THEN M=1
170 POSITION 3,4:? #6;A$(M,M+13)
175 POKE 708,A
180 SOUND 1,A,10,10:SOUND 2,B,10,7:SOU
ND 3,C,10,5
190 IF PEEK(764)<>255 THEN SOUND 1,0,0
,0:SOUND 2,0,0,0:SOUND 3,0,0,0:GOTO 10
0
200 FOR DE=1 TO D*DELAY:NEXT DE:SOUND
1,0,0,0
210 GOTO 150
220 REM TUNE 1
230 DATA 60,144,182,15,68,0,243,5,72,1
82,0,10,81,193,0,10,91,217,0,10,81,193
,0,10,72,182,0,10,91,144,0,10
240 DATA 81,193,243,5,72,193,243,5,68,
162,0,5,81,162,0,5,72,182,0,15,81,136,
0,5,91,144,0,10,96,162,243,10
250 DATA 91,144,182,20,0,0,0,1
260 DATA 60,144,182,15,68,0,243,5,72,1
82,0,10,81,193,0,10,91,217,0,10,81,193
,0,10,72,182,0,10,91,144,0,10
270 DATA 81,193,243,5,72,193,243,5,68,
162,0,5,81,162,0,5,72,182,0,15,81,136,
0,5,91,144,0,10,96,162,243,10
280 DATA 91,144,182,20,0,0,0,1
290 DATA 81,193,0,15,72,243,0,5,68,162
,0,10,81,193,0,10,72,182,0,15,68,243,0
,5,60,144,0,10,81,193,0,10
300 DATA 72,182,0,5,64,182,0,5,60,193,
0,10,53,72,182,5,47,72,182,5,45,72,217
,10
310 DATA 47,81,162,10,53,91,162,10,60,
96,243,20,0,0,0,1
320 DATA 60,144,182,15,68,0,243,5,72,1
82,0,10,81,193,0,10,91,217,0,10,81,193
,0,10,72,182,0,10,91,144,0,10
330 DATA 53,91,136,5,53,91,136,5,53,91
,136,5,53,91,136,5,60,91,144,15,68,81,
136,5,72,91,121,10,81,96,243,10
340 DATA 91,144,182,30,0,0,0,1,0,0,0,-
1
350 REM TUNE 2
360 DATA 121,144,182,10,72,144,182,10,
81,0,243,10,91,0,243,10,121,136,182,30
,0,0,0,1,121,193,0,5,121,193,0,5
```



```
370 DATA 121,144,182,10,72,144,182,10,
81,0,243,10,91,0,243,10,108,144,0,30,0
,144,0,10
380 DATA 108,136,162,10,68,136,162,10,
72,193,0,10,81,193,0,10,96,243,136,30,
136,0,0,10,60,96,162,10
390 DATA 60,96,162,10,68,96,243,10,81,
96,243,10,72,91,182,30,0,0,243,10,0,0,
0,1
400 DATA 121,144,182,10,72,144,182,10,
81,0,243,10,91,0,243,10,121,136,182,30
,0,0,0,1,121,193,0,5
410 DATA 121,193,0,5,121,144,182,10,72
,144,182,10,81,0,243,10,91,0,243,10,10
8,144,0,30,0,0,0,1,0,144,0,10
420 DATA 108,136,162,10,68,136,162,10,
72,193,0,10,81,193,0,10,60,91,144,10,6
0,91,144,10,60,91,144,10,60,91,144,10
430 DATA 53,96,243,10,60,96,243,10,68,
162,0,10,81,162,0,10,91,144,182,30,91,
0,0,10,0,0,0,10
440 DATA 72,0,182,10,72,121,182,10,72,
182,121,20,72,0,182,10,72,121,182,10,7
2,182,121,20
450 DATA 72,0,182,10,60,121,182,10,91,
108,182,15,81,114,182,5,72,0,182,40,0,
0,0,3
460 DATA 68,91,217,10,68,91,182,10,68,
91,136,10,68,91,182,10,68,91,243,10,72
,91,182,10,72,91,144,10,72,91,182,5
470 DATA 72,91,182,5,72,91,136,10,81,9
1,217,10,81,91,162,10,72,91,217,10,81,
96,243,20,60,96,162,20
480 DATA 72,0,182,10,72,121,182,10,72,
182,121,20,72,0,182,10,71,121,182,10,7
2,182,121,20
490 DATA 72,0,182,10,60,121,182,10,91,
108,182,15,81,114,182,5,72,0,182,40,0,
0,0,3
500 DATA 68,91,217,10,68,91,182,10,68,
91,136,10,68,91,182,10,68,91,243,10,72
,91,182,10,72,91,144,10,72,91,182,5
510 DATA 72,91,182,5,60,96,243,10,60,9
6,162,10,68,96,162,10,81,96,136,10,91,
144,182,40,0,0,0,5,0,0,0,-1
600 GRAPHICS 0:POKE 710,20:POKE 712,20
610 POSITION 8,5:? "CHRISTMAS GREETING
S":? :? "ENTER YOUR MESSAGE":? "HIT RE
TURN TWICE AT END OF LAST WORD"
615 POKE 702,0
620 ? :INPUT X$:IF X$="" THEN 640
630 A$(LEN(A$)+1)=X$:GOTO 620
640 A$(LEN(A$)+1)="                ":PO
KE 702,64:RETURN
```

■

Review

Starcade's SAVAGE POND

1 PLAYER **16K**

Savage Pond leaves the reviewer caught between two extremes. On the one hand the review should flow easily because the game is such a joy but on the other it is difficult because you cannot make comparisons with other games. Savage Pond is unique.

It is becoming increasingly rare to find a totally original game among the growing wealth of Atari software but Gwyll Jones of Starcade has come up with a real winner. This is as far removed as you can get from the world of aliens, guns and violence yet it maintains all of the excitement and edge of the seat involvement of the classic arcade games. The game is set in the real world, the world of Nature that you or I could see in the countryside every day if we were alert and sensitive enough. In every stream and pond across the country there is a battle for life as fierce and as demanding as any defence of the earth from alien invasion. Whilst we sit comfortably at home battling off imaginary monsters, tiny creatures fight real battles against real enemies in the most savage of environments - Nature itself.

Savage Pond allows you to control the destiny of a tiny tadpole in a village pond and see him through his journey to adulthood to become a handsome frog. You must breed as many frogs as possible to build a healthy colony. This may not seem as exciting as battling off invading aliens but believe me, the suspense and excitement of achieving your goal is just as strong as in any other arcade style game.

The sense of excitement is first awakened by simply reading the instruction manual which you should do before commencing play. The playing instructions are given in narrative form and the booklet finishes off with detailed descriptions of all the characters you will encounter. These are serious and accurate descriptions of pond life, including latin names, and are a novel and interesting touch. Savage Pond is after all about the real world.

In your pond are lots of amoeba waiting to be ingested whilst on the floor of the pond are deadly hydra with poisonous tentacles. Overhead a dragon fly flits lazily by and lays an egg which sinks slowly to the bottom. Juicy worms fall into the water from time to time and you must eat these to journey along the evolutionary trail. On the bed of the pond are three eggs of frog spawn from which hatch your tadpoles to commence their grim battle through life. As well as eating worms and amoeba, you must stop the dragonfly eggs from reaching the floor of the pond where they will hatch out into dragonfly nymphs. Nymphs eat tadpoles and there is very little chance of escape. Once you have managed to eat five of those juicy worms, a beetle larva appears and if you can eat it quickly, you progress along the evolutionary trail and further hazards will be introduced to the pond. These include deadly freshwater jellyfish, water fleas, a water spider and Mother Nature's deadliest enemy - Man - who uses the quiet pond to dump deadly radioactive waste.

The game ends when three tadpoles have died but if you manage to breed a frog, an extra egg will be laid when your last tadpole dies. A female frog will bounce onto the screen to mate with your proud frog on his little island and a new egg will be laid. Watch out for the cheeky wink of Mr Frog as he embraces his lady friend. At higher levels you can control the frog as well as the tadpoles to kill off the dragonfly and fight off vicious bees.

On screen there is plenty of colour and movement. Amoeba pulsate, jellyfish bob up and down and the dragonfly buzzes overhead. Worms wriggle to the bottom and your tadpole swishes his tail through the water without respite. The movement of the tadpole is quite amazing and unlike any player movement I have seen on any other game. It is a very accurate representation of darting and flitting underwater movement.

Savage Pond is a real joy. A totally unique concept, well thought out and superbly programmed. Whilst a far cry from the usual arcade action it retains all of the excitement. It is an ideal family game and children and adults alike will marvel at the graphics and storyline. Not much more I can say except that you will not find such an original and compelling game anywhere else. Buy it and sit back proudly knowing that one of the most original games ever written for the Atari was written here in Britain by a young programmer who must surely have a bright future. •

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Games

Grubs

Sydney Brown, Australia

The Grubs are trying to escape the safety of the subway to multiply and take over the earth. Only ten Grubs are needed to start a community, so you must destroy them before ten of them escape and they start a full breeding colony. As they are deadly to touch, the only way to kill them is to first trap them by digging a hole for them to fall in. Whilst temporarily stunned you must hit them with your shovel but be quick for they soon recover. Use joystick 1 to control your man and the fire button to dig a hole or kill a trapped Grub. The higher up the screen you can trap and kill them, the more points you will score but watch out for those who get past you.

Many of you will have seen other versions of this program particularly one about some untamed fruit in an English magazine! Don't let that stop you typing it in. In his original write up for A.C.E. Newsletter, author Sydney Brown had the following to say.

'I hope you have more fun playing this game than I had programming it. The debugging process was extremely frustrating and time consuming. To be honest, I feel the quality and speed of this game surpasses many of the programs commercially available.'

He is absolutely right, it is a superb program. Get typing.

```
0 REM ******************************
1 REM *           GRUBS            *
2 REM *      BY SIDNEY BROWN       *
3 REM *   ORIGINALLY PUBLISHED IN  *
4 REM *       ACE NEWSLETTER       *
5 REM * 3662, VINE MAPLE DR. EUGENE *
6 REM *        OREGON, U.S.A.      *
7 REM ******************************
11 ? "[ESC,CLEAR]":DIM C(11),D(11),H(1
1),V(11),B(11),O(11):POKE 710,16:POKE
709,14:POKE 752,1
12 POKE 106,PEEK(106)-2
20 GRAPHICS 17:POKE 712,16:POKE 708,30
:POKE 709,140:POKE 710,188:? #6;"
G R U B S ":A=PEEK(106)*256
21 ? #6:? #6:? #6;"GRUB ON TOP LEVEL 2
0          2ND LEVEL 15          3RD LEVEL
 10          4TH LEVEL  5";
22 ? #6;"              5TH LEVEL  1        6
TH LEVEL  0            7TH LEVEL  0":? #6:
? #6;"  MISSING A TRAPPED"
23 ? #6;" GRUB LOSES 5 POINTS":? #6:?
#6;"  you have 4 lives."
100 FOR B=0 TO 511
101 IF B>423 THEN READ D:POKE A+B,D:NE
XT B:GOTO 107
106 POKE A+B,PEEK(57344+B):NEXT B
107 POSITION 4,20:? #6;"PRESS start":P
OKE 53279,0
109 IF PEEK(53279)<>6 THEN 109
110 ? #6;"[ESC,CLEAR]":POKE 710,190:PO
KE 708,44:POKE 709,222:POKE 711,142:PO
KE 756,PEEK(106):POKE 712,0
190 POSITION 0,0:? #6;"score0    dead0
  xxx"
194 GOSUB 900:GOSUB 910
195 H=9:V=22:C=32:COLOR 249:PLOT H,V:M
=1:FR=0:SC=0:KD=0:IN=7
199 N=1:GOSUB 920:N=2:GOSUB 920:GOSUB
2000:SOUND 1,255,0,4
200 ST=STICK(0):IF ST=14 AND V>1 THEN
400
202 IF ST=13 AND V<23 THEN 410
204 IF ST=11 AND H>0 THEN 420
206 IF ST=7 AND H<19 THEN 430
210 LOCATE H,V+1,Z:IF Z=32 THEN GOSUB
440
220 IF STRIG(0)=0 THEN GOSUB 470
230 N=N+1:IF N>2 THEN N=1
231 GOSUB 600
298 LOCATE H,V,Z:IF Z=32 THEN COLOR 24
9:PLOT H,V
299 GOTO 200
300 LOCATE H,V+1,Z:COLOR 32:PLOT H,V:I
F Z119ORZ=118 THEN 302
301 V=V+1:COLOR 249:PLOT H,V:GOTO 204
400 LOCATE H,V-1,Z:IF Z=222 OR (Z=32 A
ND C=222) THEN COLOR C:PLOT H,V:V=V-1:
COLOR 249:PLOT H,V:C=Z
402 LOCATE H,V-1,Z:IF Z=222 OR (Z=32 A
ND C=222) THEN COLOR C:PLOT H,V:V=V-1:
COLOR 249:PLOT H,V:C=Z
404 LOCATE H,V-1,Z:IF Z=222 OR (Z=32 A
ND C=222) THEN COLOR C:PLOT H,V:V=V-1:
COLOR 249:PLOT H,V:C=Z
408 IF Z=118 OR Z=119 THEN 450
409 GOTO 210
410 LOCATE H,V+1,Z:IF Z=222 THEN COLOR
 C:PLOT H,V:V=V+1:COLOR 249:PLOT H,V:C
=Z
412 LOCATE H,V+1,Z:IF Z=222 THEN COLOR
 C:PLOT H,V:V=V+1:COLOR 249:PLOT H,V:C
=Z
414 LOCATE H,V+1,Z:IF Z=222 THEN COLOR
 C:PLOT H,V:V=V+1:COLOR 249:PLOT H,V:C
=Z
```

```
418 IF Z=118 OR Z=119 THEN 450
419 GOTO 210
420 LOCATE H-1,V,Z:IF Z=32 OR Z=222 TH
EN COLOR C:PLOT H,V:H=H-1:COLOR 248:PL
OT H,V:C=Z
428 IF Z=118 OR Z=119 THEN 450
429 GOTO 210
430 LOCATE H+1,V,Z:IF Z=32 OR Z=222 TH
EN COLOR C:PLOT H,V:H=H+1:COLOR 250:PL
OT H,V:C=Z
438 IF Z=118 OR Z=119 THEN 450
439 GOTO 210
440 COLOR C:PLOT H,V:LOCATE H,V+3,Z:IF
 Z<>32 THEN 450
442 V=V+3:COLOR 249:PLOT H,V:C=32:RETU
RN
450 M=M+1:POKE 712,14:FOR W=100 TO 0 S
TEP -5:SOUND 0,W,8,10:NEXT W:POKE 712,
0
451 FOR W=0 TO 100 STEP 5:SOUND 0,W,8,
10:NEXT W:SOUND 0,0,0,0
454 IF M>4 THEN 460
455 COLOR 32:PLOT M+15,0:COLOR C:PLOT
H,V:C=32:H=9:V=22:COLOR 250:PLOT H,V
459 GOTO 200
460 POSITION 5,23:? #6;"tHe eNd":POKE
53279,0:SOUND 1,0,0,0:GOSUB 2010
468 IF PEEK(53279)<>6 THEN 468
469 POKE 77,0:POSITION 0,0:? #6;"
[ESC,CLEAR]":GOTO 190
470 IF H<1 OR H>18 OR V>19 THEN RETURN

471 LOCATE H,V,Z:IF Z=249 THEN RETURN
475 FOR W=0 TO 149 STEP 20:SOUND 0,14,
8,INT(W/10):NEXT W:SOUND 0,0,0,0
478 IF Z=250 THEN 490
479 IF Z=248 THEN 480
480 LOCATE H-1,V+2,Y:LOCATE H-1,V+1,Z:
IF Z=32 THEN COLOR 85:PLOT H-1,V+1:RET
URN
481 IF Z=85 THEN COLOR 32:PLOT H-1,V+1
:RETURN
482 IF (Z=118 OR Z=119) AND Y=32 THEN
COLOR 85:PLOT H-1,V+1:GOTO 500
483 RETURN
490 LOCATE H+1,V+2,Y:LOCATE H+1,V+1,Z:
IF Z=32 THEN COLOR 85:PLOT H+1,V+1:RET
URN
491 IF Z=85 THEN COLOR 32:PLOT H+1,V+1
:RETURN
492 IF (Z=118 OR Z=119) AND Y=32 THEN
COLOR 85:PLOT H+1,V+1:GOTO 500
493 RETURN
500 FOR W=1 TO 2:LOCATE H(W),V(W),Z:IF
 Z<>85 THEN NEXT W
502 FOR WW=255 TO 100 STEP -10:SOUND 0
,WW,4,14:NEXT WW:KD=KD+1
503 POSITION 14,0:? #6;KD;
504 N=W:GOSUB 920
506 SOUND 0,0,0,0:B(W)=0:IF V=1 THEN S
C=SC+20
507 IF V=4 THEN SC=SC+15
508 IF V=7 THEN SC=SC+10
509 IF V=10 THEN SC=SC+5
510 IF V=13 THEN SC=SC+1
517 POSITION 5,0:? #6;"    ";:POKE 77,0
518 POSITION 5,0:? #6;SC;" ";:IF SC<0
THEN POSITION 5,0:? #6;"_";
519 RETURN
600 LOCATE H(N),V(N)+1,Z:IF Z=32 OR Z>
220 THEN 610
601 IF (Z=118 OR Z=119) AND ((V(N)-1)/
3<>INT((V(N)-1)/3)) THEN RETURN
602 LOCATE H(N)+D(N),V(N),Z:COLOR C(N)
:PLOT H(N),V(N):C(N)=Z:H(N)=H(N)+D(N)
603 IF (Z=118 OR Z=119) AND N=1 THEN C
(1)=C(2)
604 IF (Z=118 OR Z=119) AND N=2 THEN C
(2)=C(1)
605 IF D(N)=-1 THEN COLOR 118:IF H(N)<
1 THEN D(N)=1
606 IF D(N)=1 THEN COLOR 119:IF H(N)>1
8 THEN D(N)=-1
607 PLOT H(N),V(N):IF V(N)=22 AND (H(N
)=0 OR H(N)=19) THEN 640
608 IF Z>230 THEN C(N)=C:GOTO 450
609 RETURN
610 IF Z=32 THEN 620
612 COLOR C(N):PLOT H(N),V(N):V(N)=V(N
)+1:C(N)=Z:COLOR 118:PLOT H(N),V(N)
618 IF Z>230 THEN C(N)=C:GOTO 450
619 RETURN
620 B(N)=B(N)+1:SOUND 0,14,8,B(N):IF B
(N)>1 THEN 625
622 COLOR C(N):PLOT H(N),V(N):V(N)=V(N
)+1:IF D(N)=1 THEN COLOR 119:GOTO 624
623 COLOR 118
624 PLOT H(N),V(N):RETURN
625 IF (B(N)<14 AND KD<11) OR (B(N)<8
AND KD>10) THEN RETURN
626 COLOR 85:PLOT H(N),V(N):V(N)=V(N)-
1:IF D(N)=1 THEN COLOR 119:GOTO 628
627 COLOR 118
628 PLOT H(N),V(N):B(N)=0:SC=SC-5:POSI
TION 5,0:? #6;SC;" ";:IF SC<0 THEN POS
ITION 5,0:? #6;"_";
639 SOUND 0,0,0,0:RETURN
640 COLOR 32:PLOT H(N),V(N):FR=FR+1:FO
R W=1 TO 15:SOUND 0,INT(RND(0)*100),10
,10:NEXT W:SOUND 0,0,0,0:GOSUB 920
```

continued on page 33

Feature

Going for a Drive

Harvey Kong Tin, New Zealand

I bought my Atari 800 48K computer last December, and since then I have sampled as many of the cartridges and cassette games that I could get my hands on - of course I have also keyed in as many ATARI BASIC program listings that I could find. Recently I took the plunge and decided to upgrade to a disk drive. This article is about my impressions on changing from cassette to disk, and whether it turned out to be worthwhile.

The obvious advantage of a Disk Drive is the speed and reliability of loading and saving any program and because of the random access of Disk Files, you can immediately call out the file you want. The disk drive by itself is rather limited - its the useful programs that you can run on it that make it worthwhile. The DOS (Disk Operating System) is very good but you have to go out from BASIC and into DOS to use any of its menu commands. To use DOS more efficiently I like using a Wedge program (from November's Compute!) to access the more useful menu commands, while still in BASIC!

Using an AUTORUN.SYS is a very good convenience (It is a routine which will load and run a selected program, when you switch on the computer - the Wedge is done in this manner), you could have the disk directory printed out to the screen or better still I've used it for a demonstration disk which runs through an information & istruction screen before going onto the main descriptive menu.

The disk drive makes it easier for you to get into the mood of entering in program listings - interruptions (friends calling in) are no bother, and you can save parts of programs every half hour or so (to avoid the problems of keyboard lock-up, if it occurs) - it's done instantly with a disk drive. You will also be keen to experiment with and modify programs, because all of your programming utilities will be on tap on the one disk.

On the disk, you only have 626 sectors with which to store your programs. I find that I am always running out of disks and have gone into the process of using the other side. i.e. I cut out a notch and flip the disk over, the disks have not been designed to be used like this - but I assume that it is reasonably safe to use this side. I would like to hear from others about the pros and cons of using the other side.

A whole new world other than games opens up. A good example to start on is Atari's Home Filing Manager, this well set-out Database program is the ideal thing I've been looking for to list the range of programs I have, and have room enough to include a reasonable description of the program. Tinytext can go on a disk run by an Autorun System, the text files are saved to the same disk. Other languages are now very tempting to use - Microsoft BASIC attracts me, because I have been taught some Burroughs BASIC while on a course. I have a sampler program of Video 80 (that puts 80 characters across a normal screen) from Compute, and can't wait to see a word-processing program that utilises this unique feature.

The biggest headache in going from tape to disk is in trying to upload-the commercial game tapes you have onto disk. There are utilities available which can only do certain types of programs, but the better games out are designed not to be transferred from tape to disk.

The disk-based games are not that much more outstanding than those available on tape. The disk games that I have so far seen have not been the sort that I would have rushed out to buy a disk drive for. I have so far played: The Wizard & the Princess, Repton, A.E., Threshold, SAGA Adventureland, Zork I, Starcross, Seafox, Bandits, Ulysses & the Golden Fleece, The Cosmic Balance, Wayout, Snooper Troops I, Space Eggs and The Nightmare. Some of the games have been good though. Perhaps the newer games will prove me wrong: The Pinball Construction Set, The Arcade Machine, Archon & others. I'm hoping that they will.

Of course, there is nothing wrong with staying on a cassette based computer system, you can always find plenty to do while a tape is loading: read the instructions, write a letter to Page 6, or wash the dishes. You will still get to play the great games just out: The Blue Max, Dimension X, Donkey Kong and Pole Position. But the disk drive does open up a much wider world into Atari Computing. Now where's the cash for that FX-80 printer? ●

A GREAT COMPETITION

WIN £200 OF ENGLISH SOFTWARE

1984 will see much more home produced software for your Atari and leading the way will be **ENGLISH SOFTWARE CO.** who have offered £200 worth of their latest titles to readers of PAGE 6.

ENGLISH SOFTWARE cassettes will be only £9.95 in the coming year and among the many fabulous titles to be released look out for **JET BOOT JACK, HYPERBLAST, BOMBASTIC and BATTY BUILDERS.** English software at its very best.

As well as buying their games, English Software would like you to write them. If you can write good machine language games get in touch with Phil Morris at English Software, BOX 43, Manchester M60.

And so to the competition. Hidden in the two squares below are 20 words, either English Software titles or general words to do with computing and your Atari. Find as many words as you can, list them on a plain sheet of paper with your name and address and send them in to PAGE 6. There will be prizes set aside for readers who are under 12 and they need only complete one square. Even if you can't get them all, send in your entry but be sure to put your age.

ENGLISH SOFTWARE

```
EBECAVERUNNERNOC
EQGWBEFIREFLEETQ
BNTAROTCARDZKGXB
LOVJIXMCKTTIHCSM
AHJBNEEBXSRISEWR
MTAIONQUATZDNWBB
*AAVGOHLSSNRQUHJ
GRRFFNBRROTQAXPP
YACHGRIQMQZIYQQS
PMJKEAFAQXWNCIFD
JRUPLIIGV*GEFCII
SGYAFDQNQGLTZRIQ
PHTSFOEDLZTUZWYS
```

ATARI WORLD

```
JZUKGBCQKXAZUPVG
AASJVUARUOUCGHOR
KJSDMPSSWTHCWZRI
*OMCANSUIKAFDFBD
BKWXRHEZRCITRBAR
YJXUGITERAWTFOSG
NUTYOJTVIWMSIKQM
FEPRRUEBVTPCGKNS
RWHOPS*DVUPEPFTH
UCGMPACWKRHQBORO
KSOEAFGWRKTSGMLZ
PCFMDKCEXQXKHAEC
IDISKPJN6TEEJUKG
```

There will be 20 lucky winners so you have a good chance of winning. In the event of more than 20 correct entries the winners will be drawn at random. The competition is open to all. Best of luck – get searching.

Closing date is 14th January 1984. All entries must be received by this date.

COMING NEXT ISSUE

Player Missile Graphics – a start

A look inside your 800

PLUS . . . all the usual features

READERS POLL

Results of the Readers Poll will be announced in issue 8 and your votes do count. If you have not voted please do so now, you have up to 14th January 1984.

INPUT has been held over due to lack of space but will be back next issue. Your letters are still welcome.

Games Programming

BUGS

Les Ellingham

. . . the program

Bugs is a simple game which I hope will show that some good games can be written for your Atari even if you do not understand some of the more advanced programming techniques. No player-missile graphics, no VBI routines, all of the action is achieved by POKEs to the screen. By level 9 the action gets quite fast.

You play the part of a ladybird who has to harvest a whole host of aphids by collecting them into one of four 'nests' on each side of the screen. Dotted around the place are several mushroom looking things which, if you touch them, will hatch out into more aphids. These are poisonous to a degree and will sap your strength but strength can be made up by pushing the aphids right into the nests and killing them. There are some aphids which are deadly (the orange ones) and touching these will mean instant death. These will multiply if you are not quick enough in collecting the green aphids. If your strength falls to zero, you die and you must have a certain strength ratio to progress to the next level.

In order to achieve the maximum speed possible in Basic, the main game loop has been kept short and all routines which may be needed during the course of play are at the beginning of the program. Routines which are used only once or infrequently are put at the end of the program.

Line 10 sends the program immediately to the initialisation and titles.

Line 20 is a simple delay loop with the variable DL set at different points in the program. By putting this loop at the beginning of the program more accurate timing can be achieved.

Lines 30 - 50 maintain the score. The variable SC keeps track of the points scored by killing aphids less points deducted for hatching them out. CSC is the maximum score at any one point during the game and SCORE is only updated if the points gained exceed the maximum so far. Thus hatching an aphid puts you back a number of points and you must kill more to get to a stage where you can increase your score. STR is a measure of your strength and if this falls to 0 the program jumps to the death routine. Line 50 stops the 'attract' mode.

Lines 60 - 150 are the main subroutine to determine if the aphids you are collecting collide with anything. The variables M and M2 hold the next location to which the aphid will be pushed. If that location is a 'mushroom' then the routine jumps to line 150 which hatches out the mushroom and decreases your score. If the aphid is going to collide with anything else (line 70) then we must determine if it is possible for the aphid to move aside. This is determined in lines 95 - 110 which search an array for all possible locations of escape. If none can be found, the program exits the loop to line 115 which kills the aphid by poking the ladybird into the aphid's position. The score is increased in line 120 and this line also resets the timer and checks to see if all the bugs have been killed. If there is room for the aphid to escape then line 105 jumps out of the loop and returns to line 75 which places the aphid at the next available blank position.

Lines 200 - 255 are the main game loop. Line 200 reads the joystick and if it is not being used, moves your ladybird to a new position chosen randomly from the array MPOS. This line also contains a delay routine according to the level of the game. Line 210 determines the position you are trying to move to if the joystick is active and the following lines determine if something is in that position. Table 1 will show you which characters you might bump into and you can then see where the program branches. Line 240 contains a delay loop to set the action at a speed commensurate with current level and line 245 moves your ladybird to the next position.

Lines 500 - 580 determine bonuses and take you to the next level when all the bugs have been killed. Note that line 500 will skip the bonus and next level if you have failed to improve your score in a particular level. These lines are fairly simple and merely give you 5 bonus points for each remaining mushroom and then increase the level (LV).

Lines 600 - 665 are the death routine reached either by hitting the killer bug (line 230) or by losing all your strength (line 45). Line 600 simply pokes your position with all of the characters available acccompanied by some sound before going on to give an end of game message.

Lines 800 - 820 are the sounds used when an aphid is killed. Note that the routine is used in different ways by jumping to the beginning (line 530) or entering part way through (line 115). By

. . . the game

entering a subroutine at different points, one routine can serve several purposes.

Lines 900 - 930 add a new orange bug if a certain time has elapsed without killing an aphid (line 235). It simply peeks the screen to find a blank position and then pokes in the character representing the orange bug. If you want more killer bugs to appear reduce the figure 3 in line 235.

Lines 1000 - 1100 are the titles and options and are quite straightforward. Note again the sound subroutine being used at different points.

Lines 1200 - 1280 initialise things. The array ST holds the amount by which various positions of the joystick will move your character. By reading this array in line 210 much greater speed can be achieved than by using IF...THEN statements. MPOS holds the 8 possible positions of movement from a given point. Line 1250 lowers RAMTOP to make way for the redefined character set.

Character	Code	Use
#	3	Mushroom
$	4	Aphid
%	5	Border
	7	Killer Bug

Table 1 - Refer to Page 55 of the ATARI BASIC REFERENCE MANUAL

Lines 1500 - 1790 draw the surrounding border and poke in all the characters of the display. The various numbers in the loops and in the data statements are offsets from the top left position of the screen. Lines 1630 - 1660 poke in the mushrooms and lines 1700 - 1730 poke in the bugs provided that nothing already occupies the space. If it does then a blank space is found.

Lines 2000 - 2050 alter the display list to give two lines of Graphics 1 followed by 21 lines of Antic mode 4 (Graphics 12) and one line of Graphics 1. Note that the screen is switched off in line 2005 to cut out unpleasant displays.

Lines 2500 - 2595 change the character set. The routine in line 2520 to move the character set comes from Stan Ockers and is a very fast way to mave a 1K block of memory from one point to another. Four characters are redefined to give the various coloured players. There is no room here to explain how characters are made up in Antic mode 4 but if you want to do it simply and see the results immediately, get hold of the program Magic Window.

```
0 REM ******************************
1 REM *            BUGS            *
2 REM *             by             *
3 REM *       LES ELLINGHAM        *
4 REM *    Written for PAGE 6      *
5 REM * First Published jointly by *
6 REM *     PAGE 6 - ENGLAND       *
7 REM *            and             *
8 REM *   ACE NEWSLETTER - U.S.A.  *
9 REM ******************************
10 GOTO 1000
19 REM ** DELAY SUBROUTINE **
20 FOR D=1 TO DL:NEXT D:RETURN
29 REM ** UP-DATE SCORE ETC **
30 IF SC>CSC THEN CSC=SC:SCORE=CSC+BSC
35 STR=INT(SC)/3:IF STR<0 THEN STR=0
40 POSITION 20,0:? "STR ";INT(STR);"
 ":POSITION 29,0:? "SCORE ";SCORE;
45 IF STR<=0 THEN POP :GOTO 600
50 POKE 77,0:RETURN
59 REM ** CHECK FOR COLLISIONS ETC **
60 M=Z2:M2=Z2-Z
65 IF PEEK(M+M2)=3 THEN 150
70 IF PEEK(M+M2)=4 OR PEEK(M+M2)=5 OR
PEEK(M+M2)=7 THEN 95
75 POKE M,0:POKE M+M2,4
80 SOUND 1,10,8,6:SOUND 1,0,0,0:RETURN

95 FOR I=0 TO 7:M2=MPOS(I)
105 IF PEEK(M+M2)=0 THEN POP :GOTO 75
110 NEXT I
115 POKE Z,0:POKE M,6:GOSUB 815
120 BUGS=BUGS-1:SC=SC+10:SCORE=SCORE+2
:CSC=CSC+2:POKE 20,0:POKE 19,0:IF BUGS
<=0 THEN POP :GOTO 500
125 M=0:M2=0:GOSUB 30
130 RETURN
150 POKE M+M2,4:BUGS=BUGS+1:TS=TS-1:SC
=SC-((LV*6+6)-TS)*4:GOSUB 30:GOTO 60
199 REM ** MAIN GAME ROUTINE **
200 S=STICK(0):IF S=15 THEN Z2=Z+MPOS(
INT(RND(0)*8)):FOR D=1 TO 72-LV*8:NEXT
 D:GOTO 215
210 Z2=Z+ST(S)
215 IF PEEK(Z2)=5 THEN 200
220 IF PEEK(Z2)=3 THEN GOSUB 150
225 IF PEEK(Z2)=4 THEN GOSUB 60
230 IF PEEK(Z2)=7 THEN GOTO 600
235 IF PEEK(19)>3 THEN GOSUB 900
240 FOR D=1 TO 45-LV*5:NEXT D
245 POKE Z,0:Z=Z2:POKE Z,6
250 SOUND 0,12,10,4:SOUND 0,0,0,0
255 GOTO 200
499 REM ** LEVELS AND BONUSES **
500 IF SC<CSC THEN 580
```

BUGS . . . continued

```
520 GRAPHICS 17:POSITION 6,9:? #6;"LEV
EL ";LV
525 FOR I=1 TO 20-((LV*6+6)-TS):POSITI
ON I-1,11:? #6;"*":BONUS=BONUS+5
530 V=2:GOSUB 810:V=1
535 DL=10:GOSUB 20
540 POSITION 6,13:? #6;"BONUS ";BONUS
545 NEXT I:BSC=BSC+BONUS
550 DL=500:GOSUB 20
555 LV=LV+1:IF LV>9 THEN LV=9
560 ? #6;CHR$(125):POSITION 6,9:? #6;"
LEVEL ";LV:SOUND 0,255,10,8:SOUND 1,25
4,10,8
565 FOR I=0 TO 255:POKE 708,I:NEXT I
575 DL=500:GOSUB 20:GOSUB 820
580 BONUS=0:GRAPHICS 0:POKE 755,0:POKE
 710,0:GOTO 1260
599 REM ** END OF GAME ROUTINE **
600 FOR I=255 TO 0 STEP -5:SOUND 0,255
-I,10,8:FOR D=1 TO 5:NEXT D:POKE Z,I:N
EXT I
610 FOR I=1 TO 3:GOSUB 815:NEXT I
620 GRAPHICS 18:POSITION 5,0:? #6;"GAM
E OVER"
625 IF SCORE>HI THEN HI=SCORE
630 POSITION 2,2:? #6;">>>>>>>><<<<<<<
<"
635 POSITION 5,4:? #6;"SCORE  ";SCORE
640 POSITION 5,6:? #6;"HI-SC  ";HI
645 POSITION 2,8:? #6;">>>>>>>><<<<<<<
<"
650 POSITION 3,10:? #6;"press start to
       play again"
655 POKE 711,PEEK(20)
660 IF PEEK(53279)<>6 THEN 655
665 GRAPHICS 0:POKE 710,0:POKE 755,0:S
C=10:CSC=0:BSC=0:LV=1:GOTO 1260
800 REM ** SOUNDS ETC **
810 FOR S=14 TO 0 STEP -V:SOUND 0,S*10
,12,S:NEXT S
815 FOR S=14 TO 0 STEP -V:SOUND 0,150-
S*10,12,S:NEXT S:SOUND 0,0,0,0:RETURN
820 SOUND 0,0,0,0:SOUND 1,0,0,0:RETURN
899 REM ** ADD NEW KILLER BUG **
900 X=SCREEN+INT(RND(0)*799)+40
910 IF PEEK(X)<>0 THEN 900
920 POKE X,7
930 POKE 19,0:POKE 20,0:RETURN
1000 REM ** TITLES  **
1005 GRAPHICS 18:V=1
1010 FOR I=1 TO 17 STEP 2:POSITION I,0
:? #6;"==":POSITION I,11:? #6;"==":NEX
T I
1020 FOR I=1 TO 8:POSITION I,2:? #6;"b
 ":POSITION I-1,2:? #6;" ":POSITION 19-
I,2:? #6;"s":POSITION 20-I,2:? #6;" "
1025 GOSUB 80:NEXT I
1029 DL=500:GOSUB 20
1030 POSITION 9,2:? #6;"ug"
1035 GOSUB 810
1040 POSITION 9,5:? #6;"by":POSITION 4
,7:? #6;"les ellingham"
1045 GOSUB 1200:DL=750:GOSUB 20
1050 POSITION 2,5:? #6;"select level "
;LV
1055 POSITION 1,7:? #6;"press start to
 play"
1060 IF PEEK(53279)=5 THEN GOSUB 815:L
V=LV+1:IF LV>9 THEN LV=1
1062 POSITION 15,5:? #6;LV
1065 IF PEEK(53279)=6 THEN 1250
1080 P=PEEK(708):POKE 708,PEEK(710):PO
KE 710,P
1090 DL=250:GOSUB 20
1100 GOTO 1060
1200 REM ** INITIALISE **
1210 DIM ST(14),MPOS(7)
1215 LV=1:SC=10:V=1
1220 FOR I=1 TO 14:READ A:ST(I)=A:NEXT
 I
1225 DATA 0,0,0,0,41,-39,1,0,39,-41,-1
,0,40,-40
1230 FOR I=0 TO 7:READ A:MPOS(I)=A:NEX
T I
1235 DATA 1,-1,39,-39,40,-40,41,-41
1245 RETURN
1250 POKE 106,PEEK(106)-5:GRAPHICS 0:P
OKE 710,0:POKE 755,0
1255 GOSUB 2500
1260 M=0:M2=0:Z=0:Z2=0:BUGS=LV*3:TS=LV
*6+6
1265 POKE 756,CS/256:GOSUB 2000
1270 POKE 710,10
1275 SCREEN=PEEK(88)+256*PEEK(89)
1280 GOSUB 1500:GOSUB 30:POKE 19,0:POK
E 20,0:GOTO 200
1499 REM ** DRAW SCREEN **
1500 FOR I=40 TO 79:POKE SCREEN+I,5:NE
XT I
1510 FOR I=80 TO 839 STEP 40:POKE SCRE
EN+I,5:POKE SCREEN+I+39,5:NEXT I
1520 FOR I=840 TO 879:POKE SCREEN+I,5:
NEXT I
1545 RESTORE 1560
1550 FOR I=1 TO 5:READ A:POKE SCREEN+8
85+I,A:NEXT I
1560 DATA 44,37,54,37,44
1570 POKE SCREEN+892,LV+16
1600 REM
1610 RESTORE 1620:FOR I=1 TO 24:READ A
:POKE SCREEN+A,5:NEXT I
1620 DATA 361,362,363,441,442,443,98,1
00,138,140,178,180,476,477,478,556,557
,558,740,742,780,782,820,822
1630 FOR I=1 TO LV*6+6
1640 X=SCREEN+INT(RND(0)*799)+40
1650 IF PEEK(X)=5 THEN 1640
1660 POKE X,3:NEXT I
1700 FOR I=1 TO LV*3
1710 X=SCREEN+INT(RND(0)*799)+40
1720 IF PEEK(X)=5 OR PEEK(X)=4 THEN 17
10
1730 POKE X,4:NEXT I
1740 Z=SCREEN+500+I:IF PEEK(Z)<>0 THEN
 I=I+1:GOTO 1740
1745 POKE Z,6
1750 X=SCREEN+INT(RND(0)*799)+40
1760 IF PEEK(X)=5 OR PEEK(X)=4 OR PEEK
(X)=3 THEN 1750
1770 POKE X,7
1790 RETURN
2000 REM * NEW DISPLAY LIST *
2005 POKE 559,0
2010 DL=PEEK(560)+256*PEEK(561)
2020 POKE DL+3,70:POKE DL+6,6
2030 FOR I=7 TO 27:POKE DL+I,4:NEXT I:
POKE DL+28,6:POKE DL+29,65
2040 POKE DL+30,PEEK(560):POKE DL+31,P
EEK(561)
2045 POKE 559,34
2050 RETURN
2500 REM * CHANGE CHARACTER SET *
2505 RESTORE 2530
2515 CS=(PEEK(106)+1)*256
2520 DIM MC$(32):FOR I=1 TO 32:READ A:
MC$(I,I)=CHR$(A):NEXT I:A=USR(ADR(MC$)
,57344,CS)
2530 DATA 104,104.123,204,104,133,203,
104,133,206,104,133,205,162,4
2535 DATA 160,0,177,203,145,205,136,20
8,249,230,204,230,206,202,208,240,96
2550 RESTORE 2580
2560 READ A:IF A=-1 THEN RETURN
2570 FOR J=0 TO 7:READ B:POKE CS+A*8+J
,B:NEXT J:GOTO 2560
2580 DATA 6,0,20,65,213,81,213,60,20
2585 DATA 4,130,40,170,170,170,40,40,1
30
2590 DATA 3,60,255,255,169,40,40,40,17
0
2592 DATA 7,65,20,85,85,85,20,20,65
2595 DATA -1
```

■

THE ATARI BASIC SOURCE BOOK
Compute! Publications
Reviewed by Colin Boswell

This book is an excellent reference/tutorial for anyone interested in the inner workings of Atari BASIC. It was written by Kathleen O'Brien and Paul Laughton, who wrote almost all of the source code, and Bill Wilkinson who may be familiar to you for his articles in COMPUTE! magazine. Included is a complete description of how Atari BASIC stores, retrieves and executes programs, how to access BASIC directly (accessing BASIC from BASIC?!)and a completely disassembled and well commented listing of the source code for BASIC and the built in maths ROM. As if that were not enough there is also a section on some of the bugs in BASIC, why they occur and even how they could be fixed! It carefully explains nearly every step of the interpreter from when it coldstarts to when it reaches END in a BASIC program. It also explains how BASIC stores numbers, strings and arrays, how it arranges memory, even how it converts a line that you type in into a form that the machine can understand.

Often books of this nature are spoilt because the authors automatically assume the reader has the same level of understanding of the subject as they have or, even worse, do not seem to know what they are talking about. This is certainly not the case here, this was obviously written by someone who knows their subject inside out which is not after all surprising if you consider their backgrounds. Although much of what the book contains is of a technical nature and is therefore pitched at the reader with a reasonably good knowledge of BASIC and at least some knowledge of machine language, it is well written and easily read.

In terms of its usefulness, well I think this is a case of an answer looking for a question! At one level, several of the routines may well be useful for your machine code or advanced BASIC programming and at a much higher level you may well want to create your own language using the routines in Basic as a starting point.

Either way, this is an excellent book for the intermediate to advanced user, not only as a guide to the inner workings of BASIC, but also to how language interpreters work in general. It is not a book for the beginner but if you feel like delving deeper into your Atari then this book is extremely good value for money. ●

Contact

SOUTH CHESHIRE ATARI USERS GROUP

A recently formed group that is looking for new members. They meet on the first Thursday of each month at THE EARL OF CREWE, NANTWICH ROAD, CREWE, at 7.30 p.m. Why not go along or phone Alan Davies on 0270 626969 for more information.

RADIO AMATEURS

DEREK SLATER of BURTON-ON-TRENT would like to hear from anyone in the U.K. (or the World!) particularly if they have any RTTY and/or CW programs/ideas etc. Also any users locally who are not necessarily interested in radio. Write to him at 71, Wyggeston Street, Burton-on-Trent DE14 0SD or phone 0283 63108.

LISTING SERVICE

Would you like your programs listed? It helps with debugging and may encourage you to send them to the commercial magazines who often ask for printed listings. MICHAEL JACKSON is interested in offering a service of this sort. Write to him at 53, Brewster Gardens, London W10 6AQ or phone 01 960 0932. ●

Telecommunications

Your own Bulletin Board

Telecommunications are the way of the future and the last issue of PAGE 6 pointed the way with an article by Jonathon Sanders, Sysop of SBBS. I intend to continue that theme with a description of what is involved in operating and remotely using a bulletin board.

Firstly though I will explain how I became familiar with modems and programming the 850 interface. It started when I first saw that Maplin Electronic Supplies were producing their own Modem. We decided that modems were a thing of the future and ordered some for the shop. In preparation for their arrival, I read up on telecommunications and discovered that I would need a terminal program. The only Atari compatible terminal program I knew of was JTERM published in Compute! magazine and so I typed it in.

Some weeks later, the first of the modem kits arrived and I spent the rest of the day - and night - building it. The main problem I came across was a case for it. I had not ordered one as I did not know the size required. The only case available that fitted was a fishing tackle box from Woolworths! Maplin can now however supply a case. After building the modem, I scoured the magazines for numbers of bulletin boards to ring and soon the wires were singing with the tones of my modem.

From this point I was a regular user of TBBS, a bulletin board in London, with little happening of interest apart from having to make a small modification to the modem as Maplin suggested. It was at this point that John Newgas, Sysop of TBBS went on holiday rendering TBBS inoperable. What was I to do? I had nowhere to call! Scouring the numbers again, I chanced upon CBBS North East. This was the only one I could get through to regularly so this became my haunt. Some time after, ANTIC reviewed TELETALK a smart terminal package. 'I want one' I shouted and so ordered it for stock. From that moment on I have used TELETALK for all telecommunications because of its far superior facilities.

Now we come to the point where I started to get interested in the programming of the things. CBBS NE has a download section and TELETALK has controlled download facilities (i.e. it can ask for block repeats if there is a glitch on the line), so I wanted to be be able to do this sort of download. On investigation, TELETALK has 256 byte blocks, CBBS 128 byte blocks. Foiled! This impass made me look into that impenetrable 850 manual and after the seventh successive read, my interest in bulletin boards made me decide that I wouldn't bother to write a terminal program, I would write a bulletin board! So ECABBS, the Efficient Chips Atari Bulletin Board System was conceived and the trek began.

The equipment needed to run a bulletin board is almost identical to that needed to access one. The equipment consists of a 40K Atari computer with BASIC, Atari 850 RS232 interface, T.V., at least one disk drive, a printer (preferable but not essential) and a modem. Really the only different feature is a ring detect and answering mechanism in the modem. Your modem may already have one but if not it can easily be added with a few components. The other requirement of the modem is that it can operate in ANSWER mode as all callers will be using ORIGINATE. The Board can be run with one disk but obviously the more you have, the larger the amount of information that the Board can hold.

The average Board is very easy to use as far as the Sysop is concerned. The hours of use are up to him and all he has to do is to boot the system at the appropriate time. The Software will load and run automatically and the Sysop need not do anything else. He will have the option of setting the time so that the log will give the time that the calls were received. The log is a record of the options the remote caller chose and enables the Sysop to analyse the use of the various facilities. This log may be stored on disk, on a printer, both or not at all. Another record the Board may keep is the 'Userlog'. When people sign on to the board, they are usually asked for their name and the Userlog is a store of all these names. It is more of interest than of use. These two files are called the SYSTEM files and are not accessable to the caller. The software has three types of file, the SYSTEM, MESSAGE and SOFTWARE files. Included in the System files are the program itself, any support programs and menus. Messages are stored in various ways on various systems. They may be saved in large

Matthew Jones, SYSOP, ECABBS

unalterable files which saves directory space or in individual files, which are easily modified with a word processor. The last type of file is the Software which is available for the caller to download.

There is really only one task for the Sysop to do, although it is quite a job, and that is to keep the board up to date and interesting. Old messages have to be removed, new software found, and queries have to be answered.

Calling a board is just a matter of dialling the number and when you hear the tone, connecting your modem and putting the phone down. If a voice answers, DON'T HANG UP, the person answering will tell you when the board will be back on. He is probably using the computer himself as there is no need for it to be dedicated to the BBS. When you are 'locked on ' to the host computer, the proceedure is fairly simple. If a board is run on an Atari, the very first thing you will be asked is 'Are you an Atari?' or 'Do you need line feeds?'. Ataris do not need line feeds so answer appropriately. You will then be sent a 'Welcome' message which will probably give the latest news. Next you will be asked to log on by giving your name and location before being given the main menu. This may be a short option list from which you can call up a full version or a full menu from which you can elect to have shorter versions sent in future.

Bulletin boards are there for you to explore, so try everything and leave some messages for others, even if you don't know them. BB's are interactive, if you just read and don't write, you can't get the most from the board. At certain times you may find that the screen is scrolling faster than you can read and it is therefore usually possible to pause the board's output by pressing P or CTRL-S. Any key or CTRL-Q will start it up again and E or CTRL-C will terminate the file.

Most systems have a 'Page Sysop' facility. Paging will cause an audible signal to be given by the host computer to let the Sysop know that you wish to contact him directly as opposed to leaving a message. If the Sysop is around he will break in to 'chat', an option he can select at any time. In Chat mode, the start of which will be indicated by a 'Sysop on line' message, anything you or the Sysop types will be sent to the other person. I think that you will find Sysops to be friendly creatures, so don't worry if you find you have just got back benewted from a night on the town, and whilst trying out your kit in a stupor, the dreaded 'Sysop breaking in to chat' message comes up. Even at three in the morning! He has probably just come in as well! It has happened, I was the caller!

When you have finished on the board, don't just hang up, because besides being impolite, it might confuse the BB. Select to Log Off and you will then be asked if you wish to make any comments or suggestions. Make these if you wish and you will get a thanks for calling message and the system will close.

The last thing I should mention is the two types of timeout. If you do not respond to a prompt within a minute or two, a message will be sent asking if you are still there. If you are, press a key to let the system know, otherwise it will assume you are not interested and will hang up. Also, most systems have some sort of time limit on its use, on ECABBS this is an hour, and it is designed to stop hogging and let more people use it. You will not be 'timed out' in the middle of a download, so you need not worry about getting only half a file.

Have fun. If you have any queries about modems etc. write to me or give me a ring on 0249 657744 during the day or leave a message on the board (same number) after 6p.m. ●

THE SOFTWARE REVIEWS

STEEPLEJACK 16K CASS.

ENGLISH SOFTWARE CO.

1 PLAYER

Another vertical scrolling game but with a very different and strange scenario. You have to guide Steeple Jack to the top of the chimney up several ladders which are broken in many places forcing you to jump to an adjacent ladder. Up and up he goes until . . . I know not what as I couldn't get that far. Jack is represented by an animated face with hat and sunglasses and he is bounced across the ladders by the joystick. A ghost flits across the screen but the really weird bit is when elephants (??) start falling down the ladders! I started playing the game without reading the instructions and suddenly thought I saw an elephant! The explanation is that it is all part of a dream sequence.

The game is certainly different though it could do with a little more variety. As you progress the ladders get shorter and shorter and are more awkwardly placed making it quite a challenge. One novel feature is the score which records the number of metres you have climbed. I wonder what is at the top of the that chimney?

Les Ellingham

SHOOT 'EM UP 16K CASS.

C.S. SOFTWARE

1 PLAYER

When I first saw this, I thought that C.S. Software had made a mistake with such a title but after playing it I feel that the title is just right – straigthforward and honest. That is just what the game is, a straightforward, honest, shoot-them-Invaders game but it has enough variation and style to make it well worth buying. It is certainly much better value than Atari's Space Invaders.

All types of wierd and wonderful aliens descend on you in the familiar waves and you must blast them up, but it is not always straightforward. Sometimes they come down in pairs, one behind the other and it is difficult to know if you have got them both until the second one appears. Occasionally you will hit them only a glancing blow and they will spin away to descend on you once again. Your craft is fully manoeuverable within the bottom quarter of the screen and you can let the aliens go off the bottom of the screen but you will lose points. You lose one unit of fuel for each shot fired and must last out for five or so waves until a large ship crosses the top of the screen. This must be hit dead centre for you to refuel and as the levels increase, you get fewer and fewer chances to hit it.

The aliens are set against a black background and starfield and the game uses artifacting to obtain the colours. If you have been put off in the past with American style artifacting, don't worry about this one, there is lots of colour – at least on my set. The author seems to have got the most from artifacting on the PAL system by developing from scratch in Britain.

This one joins the small but growing Hall of Fame for Cheap Atari Software and is excellent value at £7.95. It has good graphics, excellent sound and will refresh any jaded alien zapper. This is exactly the sort of game that should have been available a long time ago for the Atari. An ideal present that Mums and Dads can afford and even one that the youngsters could get with their pocket money.

Les Ellingham

NIGHT MISSION 32K DISK

SUB LOGIC 32K CASS.

1/4 PLAYERS

For all you pinball fans, this game is just what you have been waiting for. You may have seen RASTER BLASTER or even DAVID'S MIDNIGHT MAGIC but NIGHT MISSION is better than both and what is more it is also available on cassette.

The one feature which makes this game unique is that you can set your own game parameters via a menu which spans two screens. You can, for instance, change the flipper power, bumper power, ball speed, spinner friction and sound as well as many

Reviewed by Les Ellingham Steve Gould and Dave Beech

other features. The table you create can be saved for use at a later date but the game comes with 10 built in tables from Easy to 'Cosmic'!!

The graphics are created using the infamous Artifacting which can only be enjoyed to the full on an American Atari with a colour monitor. The sound is, as far as I am aware, totally unique. As many of you may know, not only can the Atari produce some very complex sound through the TV speaker, it is also capable of creating sounds through the small on-board speaker. You may have noticed this on Bug Attack or Bug Off. Night Mission uses this speaker for all of its sound output and you will be pleasantly surprised at the sounds it can produce.

One novel touch is that you have to deposit 'coins' in a 'slot' to create credits with which to play. All the usual features of a full size pinball table are included – 'SPECIAL' lane, targets to light up, free ball gate/feature, 'shoot again' facility, spinners, bumpers, match number at game over etc. The game is very enjoyable to play and a must to own as it surpasses the features of its two brothers. Whether it will hold its own against Bill Budges' Pinball Construction Kit remains to be seen.

Steve Gould

HAZARD RUN — 32K CASS.

ARTWORX — 32K DISK

1 PLAYER

Do you have fun watching them good ol' boys Bo and Luke or even cousins Coy and Vance? Ever wished you could be at the wheel of the General Lee and sit back and watch Sheriff Roscoe PPP . . Coltrane go crashing into the creek you just jumped? Get yourself a little old copy of Hazard Run my friends, and you can join in the fun.

Hazard Run is an exciting car chase game where you take control of a supercharged car (doors welded?) and drive like mad through the woods and dirt roads to escape the Sheriff. There are five different runs for you to try, from Chicken Run when you are just getting the feel of the car up to Hell's canyon and a Random Run for when you get to know the scenery too well. Steer clear of the trees and rocks and look out for the chickens too, some of them can run you off the road. You can just clip some obstacles and get her up on two wheels but be sure to steer in the right direction or she'll flip right over. The big fun though is jumping a creek but you'll have to get your foot on the floor and watch you don't come down too fast on the other side – hit those brakes.

The screen shows all the action in bird's eye view and at first sight the detail is a little disappointing but the game is fun to play and that's what counts. Once you have mastered the control, which is all by joystick, it becomes quite exhilarating to gather real speed and screech and weave between those trees. When you jump a creek the screen switches to a side-on view and you can see whether you are going to make the jump. If you are too slow watch out for the big splash. The game has quite good sound effects and whilst the graphics are not spectacular, they are good. Above all there is a sense of excitement and fun.

If you can get all the way through Hell's Canyon, Uncle Jesse would be proud of you!

Les Ellingham

WARLOCK — 32K CASS.

CALISTO SOFTWARE — 48K DISK

I just managed to get a very quick look at a pre-release copy of this one, which should be in the shops by now. If you like Airstrike/Scramble type games and thought Sea Dragon was good, then this is right up your street. It looks better than any of them. The cassette version loads with one cavern but contains a further three on the tape which you can only load by completing each one in turn. All four are automatically loaded on the disk version. There will be a full review in the next issue but meanwhile, if you are one of those Atari owners who think that anything under £25 is not worth buying, more fool you for missing out on this one. It's £14.95.

Les Ellingham

[redacted]

THE GOLDEN BATON 16K CASS.

CHANNEL 8 SOFTWARE

1 PLAYER

If you have been through the Scott Adams adventures and are still addicted, take a look at the Channel 8 Software adventures. Bryan Hayworth, the author, is England's answer to Scott Adams. The layout of the screen on these 16K machine code adventures is exactly the same as the Adventure International series.

Golden Baton is the first of the series and the object is to retrieve the Golden Baton which was stolen from the Kingdom. On your travels you will meet such things as huge slugs, a savage wolf, an ugly lizard-man and various other nefarious creatures and objects. Needless to say, all of the 'organic' obstacles can be dealt with. In one way or another!

The cleverness of the plot in all the adventures in this series is as good as any in the Scott Adams series.

These adventures were originally at the same price as the more famous series but have now been reduced to £9.95 and represent good value for money. All are a nice supplement to any adventurer's collection.

All of the adventures have full 'save game' facilities and an optional facility to change the colour of the screen.

Steve Gould

JUMPMAN 48K CASS.

EPYX

1/4 PLAYERS

Every now and again along comes a game that really stands out from the rest. Sea Dragon, Miner 2049er, Astro Chase, Pharoah's Curse and now . . . JUMPMAN.

On past form, Epyx is not one of the most exciting of software houses. You either love or hate their graphics animated adventures and their last arcade releases were very mediocre if not downright pathetic. Author Randy Glover has, however, changed all that.

Although JUMPMAN contains elements already used in other games it is the way it is put together and presented that makes it an excellent piece of software. Basically a Donkey Kong/Miner 2049er type of game, it uses simpler graphics but more than makes up for this by having no less than 30 screens for Jumpman to fight, dodge, shoot, climb, fall and puzzle his way through. There are 8 screens in the beginner's level, 10 in the intermediate and 12 in the advanced level.

An attractive feature if you don't want to (or can't!) work up through each screen in turn, is the Randomiser option. This chooses a screen at random, the only problem being that the same screen can come up twice in a row.

Very nicely done is the way each screen scrolls down into place to the tune of some well-known barrel-organ music. Also very effective is the demolition of the current screen when you lose your last Jumpman. On completion of a level, you are rewarded with a firework display and a view of Jumpman's skyscraper headquarters with all the lights on. Before this, however, you must collect bombs that have been planted throughout the building whilst avoiding the many dangers.

As with Miner, it will take some time before the last screen is reached and completed. Some screens require hand to eye co-ordination, others involve solving puzzles. All are different. This is what gives this game that rare quality amongst computer games—lasting appeal!

Dave Beech

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Beginners

First Steps

Mark Hutchinson, Belfast

There was very little time between issue 6 and the copy date for this issue to receive your questions so here are a few points which readers have raised earlier. I hope that you send in many more questions for the next column.

Q. What is the difference between an upgrade and a 48K rampack? An upgrade is just a general increase in memory whereas a rampack is a memory module connected externally to the computer. To increase the memory of a 400 is quite easy providing you take care when soldering two wires. The new memory comes as a small board that you replace the original with on the main board, also called the motherboard.

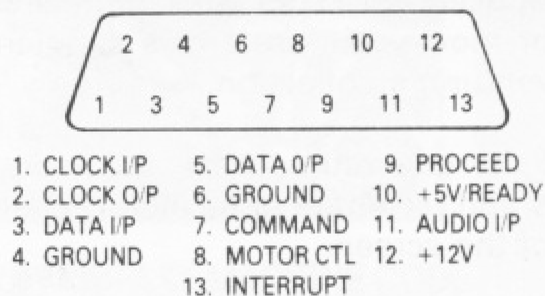
Q. As I do not have a recorder how long is it safe to leave the computer on for? Overnight? Normally anything electronic is life-tested over extremes of temperature and humidity. Modern components are extremely reliable and give long service, but just how long I cannot say. I would consider the expense of a 410 recorder to be more economical in the long run rather than risk leaving the computer on 24 hours a day.

Q. What is the right hand cartridge slot for on the 800? Atari have not disclosed what they originally designed the right hand slot for. You can use a programming aid called Monkey Wrench in this slot and in America you can obtain a disassembler/EPROM burner which will copy anything in the left slot. This does however infringe copyright. Note that the new XL range has only one cartridge slot.

Q. Is it possible to connect headphones to the computer? It is far easier to connect headphones to the TV set and in fact many modern sets are wired for this. If you wish to explore the workings of the machine then get a copy of the Technical Reference Notes which gives circuit diagrams.

Q. How do you work out a number to put in a USR statement? USR is one of the most powerful commands available to you in BASIC. It is a machine language call that comes in many forms and usually it is better if you know some assembly codes to use it fully. One form is X=USR(SL) where X is a variable or function worked out from the commands placed into memory at location SL. Another is X=USR(S1,S2,N) where S1 is the data you shift from string location 1 to string location 2 and N is the number of bytes moved. This is useful to perform high speed changing of PMG or character redefinition. You will normally see USR used with READ . . DATA and numbers being POKEd into page 6 (1536-1791). These numbers are the decimal equivalents of the assembly codes or memory locations. This is worth a PAGE 6 tutorial and I am sure that someone out there is willing to write such an article to help us out? As a little example of USR, try X=USR(61530) and SYSTEM RESET.

Q. Is it possible to control an external relay with the I/O socket? If you have the technical expertise then, yes it is possible. The serial I/O port on the right hand side of the machine switches the 410 recorder on and off, provides a +ve 4V data and even allows a +ve outlet against its own ground for peripherals. Here is a diagram of the SIO pins but note that a lot



more may be available using the controller ports as they can be directly read from potentiometers. Once again I recommend the Technical Reference Notes as this is a large area to cover. A good memory map will help or even an article in PAGE 6? (There will be an article covering this in Issue 8.—Ed.)

Some of the questions this month have been a bit technical but do not let that put you off sending in any questions however simple. Don't forget to let me know if you do not want your name published.

Write to Mark at BAUG Software, P.O. Box 123, Belfast, N. Ireland BT10 0DB.

WANTED

PROGRAMS, ARTICLES REVIEWS

That program you have written may be of interest to someone else. Don't hide it away, send it in to PAGE 6 for others to share.

What about those things you have now learned? Why not try to help other users understand? Write an article— on any Atari related subject.

Got a favourite game? Review it. Let others know how good (or bad) it is.

REWARD

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£50 of software to the winner of our annual Readers' Poll. Other awards for runners-up.

Typo Tables

FULL DETAILS OF TYPO APPEAR IN ISSUE 5

SLOTS - PAGE 8

Variable checksum = 348295

Line num range	Code	Length
10 - 120	NZ	433
130 - 230	GB	549
240 - 310	FB	543
320 - 430	QE	510
440 - 550	DA	531
560 - 670	VM	402
680 - 780	TV	505
790 - 900	RY	421
910 - 1000	RM	541
1010 - 1120	OZ	505
1130 - 1240	DD	447
1250 - 1355	YI	454
1360 - 1470	HA	306
1480 - 1600	UW	415
1610 - 1725	XN	495
1730 - 1840	CH	444
1850 - 1960	VJ	315
1970 - 2050	IC	523
2060 - 2070	CE	91

GRUBS - PAGE 16

Variable checksum = 385756

Line num range	Code	Length
0 - 20	UC	596
21 - 109	ZZ	508
110 - 204	NE	527
206 - 402	MB	510
404 - 420	NC	509
428 - 454	XT	510
455 - 478	XN	503
479 - 500	QB	542
502 - 600	HO	529
601 - 610	HG	517
612 - 628	GV	575
639 - 910	BO	543
911 - 926	CH	548
929 - 2000	KV	548
2009 - 2019	ZB	454

GREETINGS - PAGE 12

Variable checksum = 282506

Line num range	Code	Length
1 - 35	EV	456
40 - 120	AT	552
140 - 230	ET	600
240 - 300	TI	535
310 - 380	UK	589
390 - 440	RM	554
450 - 500	KY	552
510 - 640	SU	400

BUGS - PAGE 20

Variable checksum = 572987

Line num range	Code	Length
0 - 19	GB	411
20 - 75	RN	413
80 - 200	PS	583
210 - 500	EP	359
520 - 565	ML	507
575 - 645	TH	535
650 - 899	AJ	521
900 - 1035	ED	504
1040 - 1210	JI	497
1215 - 1275	IM	468
1280 - 1620	RN	511
1630 - 1760	NQ	403
1770 - 2505	XT	348
2515 - 2595	IW	486

GRUBS . . . continued from page 17

```
645 POSITION 18,23:? #6;FR;:IF FR>9 TH
EN 460
649 RETURN
900 FOR W=2 TO 20 STEP 3:POSITION 0,W:
? #6;"UUUUUUUUUUUUUUUUUUUU":NEXT W
901 POSITION 0,23:? #6;"]]]]]]]]]]]]]
free0]";
909 RETURN
910 FOR W=2 TO 20 STEP 3:X=INT(RND(0)*
8)+1:POSITION X,W:? #6;"^":POSITION X,
W+1:? #6;"^":POSITION X,W+2:? #6;"^"
911 NEXT W
912 FOR W=2 TO 20 STEP 3:X=INT(RND(0)*
8)+10:POSITION X,W:? #6;"^":POSITION X
,W+1:? #6;"^":POSITION X,W+2:? #6;"^"
913 NEXT W
919 RETURN
920 R=INT(RND(0)*4+1):ON R GOTO 921,92
2,923,924
921 V(N)=1:GOTO 925
922 V(N)=4:GOTO 925
923 V(N)=7:GOTO 925
924 V(N)=10:GOTO 925
925 IF N=1 THEN H(1)=0:C(1)=32:B(1)=0:
D(1)=1
926 IF N=2 THEN H(2)=19:C(2)=32:B(2)=0
:D(2)=-1
929 RETURN
1000 DATA 191,191,0,253,253,0,239,239,
80,112,168,81,113,115,127,62
1010 DATA 10,14,21,142,138,206,254,124
,48,48,16,240,16,112,216,8
1020 DATA 26,26,126,88,88,28,22,48,12,
12,8,15,8,14,27,16
1030 DATA 0,0,0,255,0,0,0,0,0,0,0,25
5,0,0,0
1040 DATA 255,255,255,255,255,255,255,
255,129,255,129,129,129,255,129,129,0,
0,0,255,255,0,0,0
1050 DATA 90,90,90,114,77,77,77,90,90,
77
1100 DATA 60,53,47,45,40,35,31,29
1200 DATA 29,31,35,40,45,47,53,60,64,7
2,81,91,96,108,121,128,144,162,182,193
,217,243
2000 RESTORE 1100:FOR TU=1 TO 8:READ N
O:SOUND 0,NO,10,8:FOR W=1 TO 20:NEXT W
:NEXT TU
2009 SOUND 0,0,0,0:RETURN
2010 RESTORE 1200:FOR TU=1 TO 11:READ
NO:SOUND 0,NO,10,8:POKE 712,NO:FOR W=1
 TO 25:NEXT W
2011 READ NO:SOUND 0,NO,10,8:POKE 712,
NO:FOR W=1 TO 12:NEXT W:NEXT TU:SOUND
0,0,0,0
2012 FOR W=1 TO 84:NEXT W:FOR W=1 TO 3
:SOUND 0,243,10,8:FOR WW=1 TO 10:NEXT
WW:SOUND 0,0,0,0
2013 NEXT W
2019 POKE 712,0:SOUND 0,0,0,0:RETURN
```

■

Utility

Largeprint

Colin Friston, Surrey

Liven up your printer with this banner utility which allows you to print large fancy headings. Although it is written for the 40 column 822 printer it should be easy to adapt it to any other printer.

```
0 REM ******************************
1 REM *     L A R G E P R I N T    *
2 REM *            BY              *
3 REM *       COLIN FRISTON        *
4 REM ******************************
5 REM
10 DIM B$(320),A$(9),G$(5),T$(1):GRAPH
ICS 0:POKE 82,0
20 ? :? "INPUT YOUR WORD ";:INPUT G$:?
:CT=-1
30 FOR T=1 TO 320:B$(T,T)=" ":NEXT T
40 FOR LOOP=1 TO LEN(G$):T$=G$(LOOP,LO
OP):NO=((ASC(T$)-32)*8)+57344
50 FOR YO=NO TO NO+7:CT=CT+1
60 A$="         "
70 N=PEEK(YO):NN=N
80 N=N-256:IF N>=0 THEN A$(1,1)=T$:GOT
O 100
90 N=N+256
100 N=N-128:IF N>=0 THEN A$(2,2)=T$:GO
TO 120
110 N=N+128
120 N=N-64:IF N>=0 THEN A$(3,3)=T$:GOT
O 140
130 N=N+64
140 N=N-32:IF N>=0 THEN A$(4,4)=T$:GOT
O 160
150 N=N+32
160 N=N-16:IF N>=0 THEN A$(5,5)=T$:GOT
O 180
170 N=N+16
180 N=N-8:IF N>=0 THEN A$(6,6)=T$:GOTO
 200
190 N=N+8
200 N=N-4:IF N>=0 THEN A$(7,7)=T$:GOTO
 220
210 N=N+4
220 N=N-2:IF N>=0 THEN A$(8,8)=T$:GOTO
 240
230 N=N+2
240 IF N=1 THEN A$(9,9)=T$
250 N1=CT*40+LOOP*8-7
260 N2=CT*40+LOOP*8
270 B$(N1,N2)=A$
280 NEXT YO:CT=-1:NEXT LOOP
290 PRINT B$:LPRINT B$
300 GOTO 20
```

■

This page is put aside each issue for the exclusive use of Birmingham User Group

Bug Club Call

This is the time of year to wish all members the compliments of the season but as we are a Computer Users Group, why write it down? Just type in the following program.

```
10 REM ******************************
11 REM *      CHRISTMAS CARD        *
12 REM *            BY              *
13 REM *         MIKE ASTON         *
14 REM ******************************
100 DIM M$(37),D$(4)
110 M$="HAPPY CHRISTMAS TO ALL OUR MEM
BERS   "
200 GRAPHICS 10
210 FOR C=0 TO 4
220 POKE 708+C,12*16+C*2+7
230 NEXT C
300 POKE 559,42:POKE 53277,2:POKE 623,
PEEK(623)+1
310 FOR X=0 TO 3:POKE 53248+X,64+X*32:
POKE 53256+X,3:POKE 704+X,54:NEXT X
320 B=PEEK(742)-4:POKE 54279,B:B=B*256
330 FOR I=0 TO 1023:POKE B+I,0:NEXT I:
B=B+586
400 Y=0
410 FOR C=4 TO 9
420 COLOR C:FOR Y=Y TO Y+2
430 PLOT 0,Y:DRAWTO 79,Y
440 NEXT Y:NEXT C
450 IF Y<175 THEN 410
500 CS=PEEK(756)*256
520 A=ASC("B")-32:P=CS+A*8
530 FOR J=0 TO 7:POKE B-32+J,PEEK(P+J)
:NEXT J
540 A=ASC("G")-32:P=CS+A*8
550 FOR J=0 TO 7:POKE B+352+J,PEEK(P+J
):NEXT J
560 A=ASC("U")-32:P=CS+A*8
570 FOR J=0 TO 7:N=PEEK(P+J):N1=INT(N/
16):N=(N-16*N1)*16:POKE B+96+J,N1:POKE
 B+224+J,N:NEXT J
610 FOR S=1 TO 34:D$=M$(S,S+3)
620 FOR I=1 TO 4:A=ASC(D$(I))-32:P=CS+
A*8
630 FOR J=0 TO 7:POKE B+128*(I-1)+J,PE
EK(P+J):NEXT J
640 X=PEEK(708):FOR F=0 TO 3:POKE 708+
F,PEEK(708+F+1):NEXT F:POKE 712,X
650 NEXT I:NEXT S
660 GOTO 610
```

The program has been written by the Club Secretary, Mike Aston, for you, the members, but we desperately need two-way communication. So, when you have a spare moment over the Christmas holidays, we would like you to send the Club a message for the New Year in the form of a program. You can use the above program as a base or write one of your own. When you have done it, send a tape to Mike Aston at 42, Short Street, Wednesbury, W. Mids. As an added incentive, there will be a worthwhile prize awarded to the best program. Help kick off the New Year in the right way. Write a program.

QUESTIONNAIRES

Every member had a questionnairre from Steve Gould with the last magazine. If you have still got it please fill it in, even if you are not interested in the games meetings proposed. Your answers will shape the future of the Club. Don't wait till next year, post the form to Steve NOW.

NEXT YEAR'S MEETINGS

Quite a few changes are being proposed for next year but as this is being written before the AGM and before the new Committee has been elected it is not possible to give details of next year. If you are not absolutely sure when the meetings are, please phone one of the existing Committee members to save a wasted journey. The phone numbers are in Issue 3.

STOP PRESS...STOP PRESS...

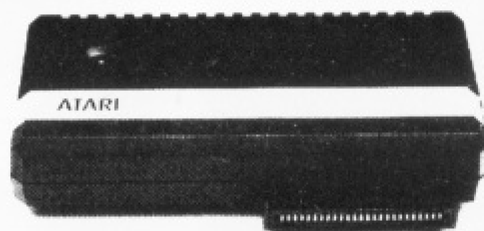
The following committee was elected at the AGM on 24th November 1983

Chairman: John While
Vice Chairman: Mike Reynolds-Jones
Secretary: Mike Aston
Treasurer: Angus Irons
Committee: Julian Bailey
Keith Mason
Steve gould
Lawrence Miller
Wilf Coton
Colin Boswell

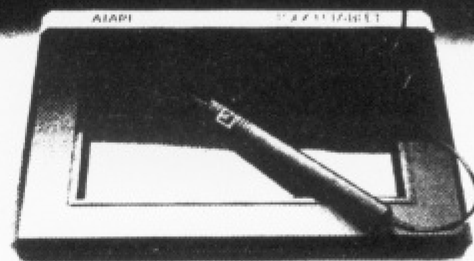
Meetings will be held monthly in future with Special Interest Groups holding meetings between the main monthly meetings. Contact a committee member for details.



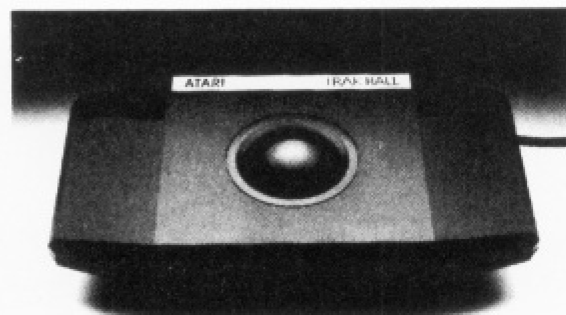
1. Program Recorder.



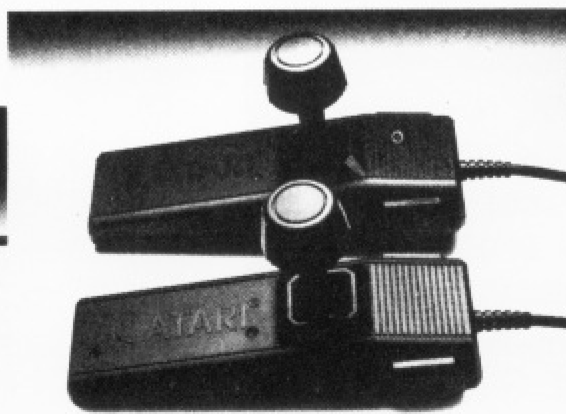
2. 64K Memory Module.



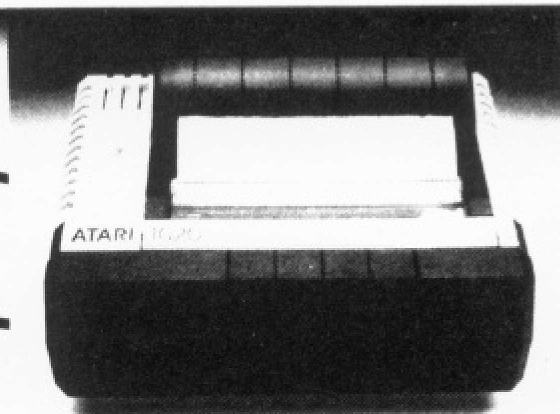
3. Touch Tablet.



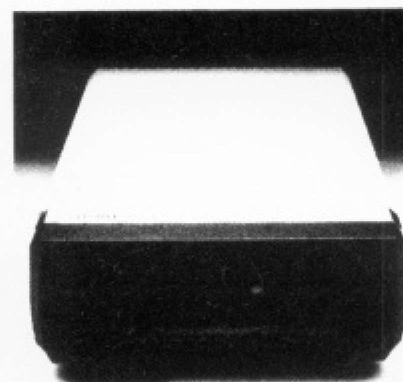
4. Trak Ball™ Controller.



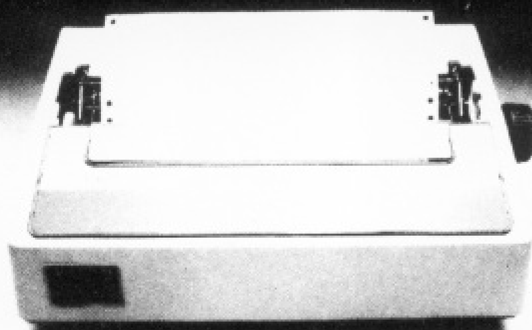
5. Super Joysticks.



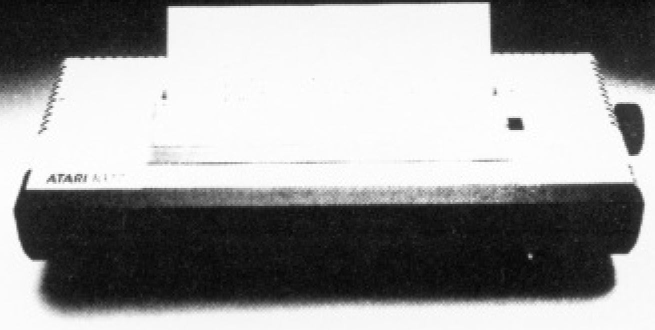
6. Colour Printer.



7. Disk Drive.



8. 80 Column Dot Matrix Printer.



9. Letter Quality Printer.

These peripherals will be available soon:

1. ATARI 1010™ Program Recorder for low cost storage and retrieval capability. Data transmission 600 baud. Storage capability 100K bytes on a 60 minute cassette. Track configuration 4 track, 2 channels (digital and audio). Auto record/playback/pause control.

2. ATARI 64K Memory Module gives the 600XL a massive 64K RAM.

3. ATARI Touch Tablet enables you to paint pictures and draw diagrams, with the touch of a stylus.

4. ATARI Trak Ball™ Controller enables cursor movement in any direction; adds to the pleasure of Atari games.

5. ATARI Super Joysticks. Gives you a greater competitive edge over your games.

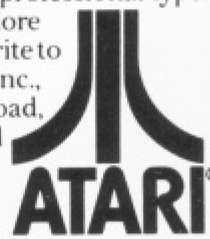
6. ATARI 1020™ Colour Printer plotter. Four colour graphic print capability. 40 column. 10 characters per second. 5, 10 and 20 characters per inch.

7. ATARI 1050™ Dual Density Disk Drive. 5¼ inch disks holding 127K randomly accessible bytes provides both expansion and flexibility for your 600XL system with DOS III.

8. ATARI 1025™ 80 Column Dot Matrix Printer prints 5, 10 or 16.5 characters per inch. 40 characters per second. Ideal for program listings, financial reports, etc.

9. ATARI 1027™ Letter Quality Printer for word processing letters in professional type.

If you'd like to know more about the ATARI 600XL, write to Atari International (UK) Inc., P.O. Box 407, Blackhorse Road, London SE8 5JH and we'll send you all the details.



The new Atari XL home computer system.

FOR ALL INFORMATION ON NEW ATARI PRODUCTS CALL-WRITE OR PHONE

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